EDUCATIONAL SCREEN

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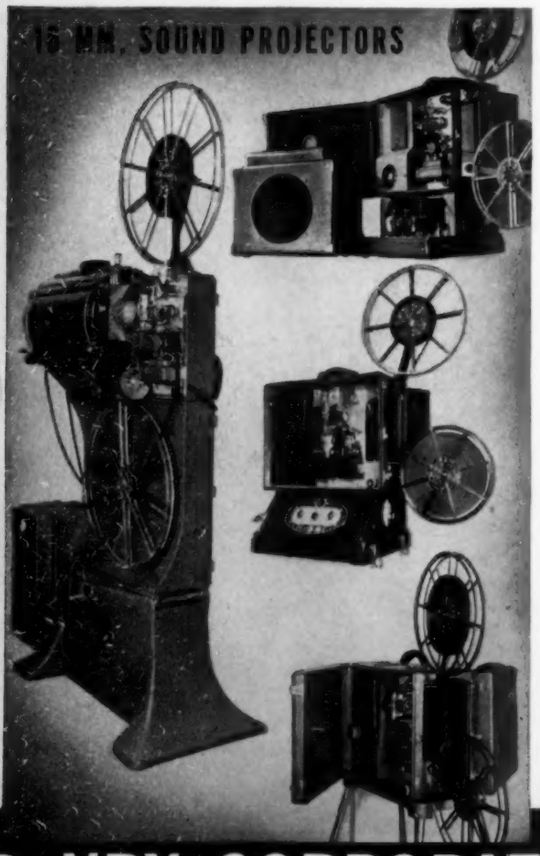

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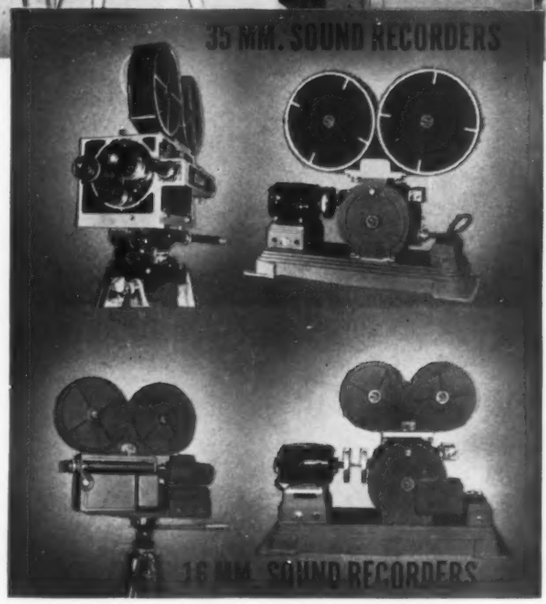

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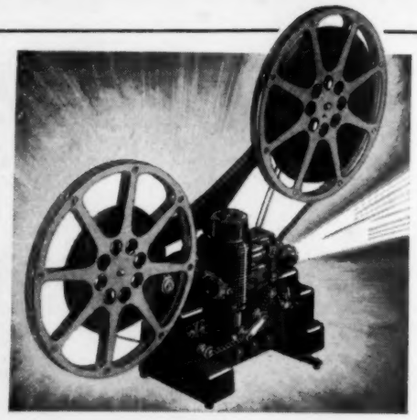

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Diversitorials

Editorial Advisory Board

ON THE following page appear the ten portraits of our Editorial Advisory Board, selected last fall by representative national ballots and functioning smoothly and effectively since January 1st, 1940. We cannot adequately express our deep appreciation of the service rendered to the visual field, as well as to the magazine, by this group of leaders, each burdened with the heavy responsibilities of his own executive position yet willing to make still further contribution to the good of our common cause.

"Perceptual Learning"

THE Board article this month is by John A. Hollinger. Its very title, "Perceptual Learning," bids fair to rouse much profitable discussion. On another page, Charles F. Hoban, Jr., now conducting the official page of the Department of Visual Instruction, "Among Ourselves," emphasizes the significance of Hollinger's phrase. It is perhaps the nearest approach yet made to a correct name for the visual idea in education.

The percept is purely sensory in origin, the concept intellectual. The percept is the essential raw material of all thought. Language is the essential medium of all thought, by speaker or thinker. Words are therefore an inevitable complement of all learning. Words alone can serve to interpret and clarify the simple percept, (a clap of thunder merely heard), to combine percepts by several senses into one complex percept (an orange seen, felt, smelled, and tasted), and finally to achieve the gradual assembly, correlation, coalition, evolution of percepts into concepts of unlimited complexity, and to integrate these concepts into the mass of concepts already in the mental storehouse. To carry through this process successfully means true education. And "perceptual learning" is the foundation of it all. What are we seeking in "visual education" but "perceptual learning"?

(The Board article for March will be by William M. Gregory)

Our Modern Curriculum

THE other day a 12-year-old boy came home from his seventh-grade labors in a public school of one of our great city systems. He greeted the family with "Well, today we've been learning all about syphilis." He pronounced the y as in "fly" (probably following faithfully "teacher's" pronunciation). Our information does not state whether visual aids were also used to strengthen the impact of this savory subject upon the young minds. There is an ample stock of slides and films available which would certainly add grisly vividness if desired. We incline to hope for positive neglect of visual aids in this instance.

We find this an interesting manifestation of advanced ideas at work on the school curriculum, all aimed, to be sure, at educational progress. We assume that the school in question teaches only what is authorized by the city school administration and that hundreds of other schools in that same city are doing the same service of enlightenment for thousands of seventh-graders. Perhaps all city school systems nowadays are equally advanced. We wonder now whether the administration will present "companionate marriage" and "birth control" to the pupils this spring or postpone these subjects to the eighth grade. We wouldn't know. There is much that we do not know about the modern curriculum. At any rate, when we are still turning out college graduates who cannot spell their mother tongue, it is real comfort to know that the twelve-year-olds are learning "all about syphilis" anyway.

The Film Evaluation Project

THE Film Evaluation Committee of teachers from all parts of the country is steadily growing. We no longer know the total number of teachers engaged. For an increasing number of Visual Instruction Directors are sending in score cards over their own signatures, made from reports of many different teachers. In general, we aim at direct contact with each cooperating teacher in order to maintain our credit record of score cards returned by each. In many situations, however, it is doubtless more practical, and hence quite logical, for Directors to do all the scoring from a central point. We therefore issue the following cordial invitation.

All Directors or Teachers in charge of visual activities in one school or school-system are invited to join the Film Evaluation Project under any one of the following plans:

1. Send us names and schools of your teachers willing to score at least 10 films a year, in any grade and all subjects. Individual judge-numbers will be assigned and outfit sent to each, score cards to be returned by each direct to us in prepaid envelope furnished.

2. Tell us how many individually numbered outfits should be sent to you for distribution to teachers of your selection, one outfit to each. Cards from all teachers returnable by you in prepaid envelope furnished. Returned cards will identify teacher and judge-number for our credit record.

(*Plans* 1 *and* 2 *provide free copy of* "1001 *Films*" *for each judge*)

3. Or you may act as sole judge in your territory, with single judge-number, receive the outfit with extra score cards as needed, all cards returned to be credited to you regardless of what teacher scored the film.

(*Plan* 3 *provides no copy of* "1001 *Films*" *for the teachers cooperating*)

Plan 3 is desirable where teachers score less than ten Films apiece in the school year. Any teacher scoring ten or more films should be a regular member of the Evaluation Committee with his or her recorded judge-number.

NELSON L. GREENE

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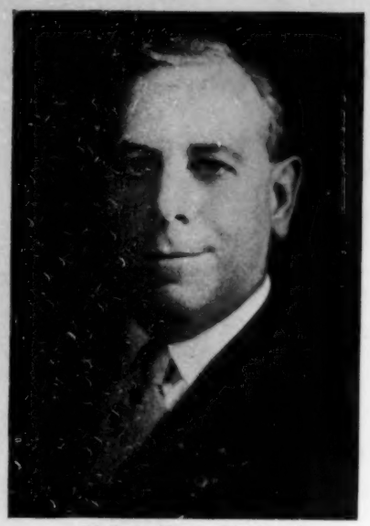

Photo by Parry, Pittsburgh

Above: **J. A. Hollinger,** Director, Department of Science and Visualization, Pittsburgh Public Schools, Pittsburgh, Pa.

Above: **W. M. Gregory,** Director, Educational Museum, Cleveland Public Schools, and Director, Institute of Visual Instruction, Western Reserve University, Cleveland, Ohio.

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Left: **Paul C. Reed,** Director, Department of Radio and Visual Education, Board of Education, Rochester, N. Y.

Right: **W. W. Whittinghill,** Director, Department of Visual and Radio Education, Board of Education, Detroit, Mich.

Perceptual Learning

Placing much needed emphasis on the meaning, place and importance of the "percept" in all learning, and suggesting a new name for the visual movement in education.

JOHN A. HOLLINGER
Director of Science and Visualization
Pittsburgh, Penn., Schools

HAD Thomas A. Edison lived before Gutenberg; had the camera been invented before the printing press; had pictorial presentation and representation preceded the textbook, how different would be school procedures! How different might be the accumulated records of past and present events! The article in EDUCATIONAL SCREEN, Volume XVIII, Number 9, November, 1939, by Wendell Thomas, "The Perceptual Stream of Teaching," called attention to some important developments in the history of education. In good schools everywhere there are evidences of alert senses quickening the mental processes. The formal textbook assignments and the lectures are giving way to *"situations."*

"What is designated by the word 'situation' is not a single object or event or set of objects and events. For we never experience nor form judgments about objects and events in isolation, but only in connection with a contextual whole. This latter is what is called a 'situation'. I have mentioned the extent in which modern philosophy had been concerned with the problem of existence as perceptually and conceptually determined. . . . . In actual experince, there is never any such isolated singular object or event; an object or event is always a special part, phase, or aspect, of an environing experience world—a situation. . . . . There is always a field in which observation of this or that object or event occurs. Observation of the latter is made for the sake of finding out what that field is with reference to some active adaptive response to be made in carrying forward a course of behavior. One has only to recur to animal perception, occurring by means of sense organs, to note that isolation of what is perceived from the course of life-behavior would be not only futile, but obstructive, in many cases fatally so."[1] "All forms of knowledge are based upon and derived from perceptions."[2] "We may accept as a brief definition of perception the statement that is commonly given, 'sensation with meaning attached'. When we consider perception as a phase of thinking we may reverse the definition, and say perception as a thinking process consists of attaching meaning to any sensation."[3] The reader will profit by acquaintance with references listed at the end of this article.

Situations that challenge attention and stimulate interest are essential to growth. In such situations attitudes are developed and ideation takes form. Some individuals have keener senses than others. The condition of sense organs and their functioning are determined by their structure as well as by practice. Children may be given ample opportunities for practice in the proper use of their senses. "Through experience we come to pay attention to many things which previously would have been neglected and also to neglect many things which previously would have commanded our attention. We are interested in matters to the degree to which we have formed habits of paying attention to them."[4]

Sense-data and rational principles are both part and parcel of understanding and insight. Nevertheless, in a democracy where people are free under law and where people have voice and vote in making, amending, and repealing laws, understanding and insight based on sense-data or objective evidence are vitally important.

On account of definite limitations in the past schools found difficulty in providing situations and experiences with sufficient sense-data. With the advent of new devices teachers and pupils find more challenging situations. Photographic prints, such as, lantern slides, motion pictures and paper prints, may now be used by every teacher. Projection equipment is simple and adequate. Graphic modes of presenting facts and museum materials now generally available may be part of every school's equipment. In the laboratory pupils

Lantern Slide Library for Pittsburgh Schools

[1]Dewey, John, *Logic* The Theory of Inquiry, 1938, pp. 66-67.
[2]Benson, C. E., Lough, James E., et al., Psychology for Teachers, 1926, P. 88.
[3]Stormzand, Martin J., Progressive Methods of Teaching, 1924, p. 97.
[4]Robinson, E. S., Practical Psychology, 1926, p. 187.

Film Library available to Pittsburgh Schools

have experiences that challenge attention and furnish objective data.

The devices mentioned above are not supplementary or "extra" but integral and essential in sound educational procedures. It is unthinkable that a school system should continue practices of the ox-cart age while the rest of the community uses freely such modern devices as the automobile, telephone, radio and motion picture. Caution must be exercised in selecting proper types of materials. The school system is an organzation that functions to specific ends. Individuals too readily attempt to use the schools for selfish purposes. Some materials offered to schools for the avowed purpose of educating children are worse than worthless. Cooperative evaluation schemes such as those of the Motion Picture Project of the American Council on Education, the Educational Screen, the Commission on Human Relations of the Progressive Education Association, and others, should produce notable results.

Materials are effective aids to learning only when they have educational value and are properly used. Planning and preparation for use of lantern slides, motion pictures, graphs, cartoons, or museum specimens are as necessary as with the use of textbook or the lecture method. Good architecture provides a utility (preparation) room in every school building with electric outlet, projection screen, opaque shades and other essentials where teachers may project lantern slides, motion pictures and other photographic prints in preparation for the organization and presentation of learning situations. In such utility rooms laboratory exercises may also be prepared.

Glibly it is said that in schools children are taught to think, but blood cannot be squeezed out of a turnip. Accurate and just inferences must be based on objective facts. Those individuals with the richest accumulation of sense-data, and experience of various kinds think most accurately and infer most justly.

As a guide to the use of aids to perceptual learning some purposes might be briefly stated as follows:

1. Challenge and stimulate interest
2. Cultivate observation
3. Stimulate and control wholesome imagination
4. Provide bases for right attitudes, for just inferences, and for reflective thinking.

(Concluded on page 74)

School-Made Motion Pictures For Public Relations in Ohio (II)

Second article of series, suggesting subjects for filming, needed equipment and methods of financing.

WILLIAM S. WAGNER
Montpelier, Ohio, Public Schools

THE above script (see January issue) of a picture used to interpret the work of the schools in the teaching of reading, is an example of how the motion picture can be used in a specific area. Very effective pictures can be produced to show the work of the school as a whole—the general activities picture. This type of picture is a series of shots of the pupils participating in their various activities, the results of their work when it can be shown, and the school plant. Various techniques are used in this type of picture to relate the parts to the whole. For example, the principal is showing a parent around the school, or one pupil is followed through a complete day at school.

When the administrator has outlined his public relations program, he is in a position to decide what motion pictures should be produced and their relationship to the total program. This relationship should be made clear in the pictures. A suggestive list of subjects for motion pictures is included here.

A. *The curriculum in action*—(1) If the program is set up on a subject basis each subject may be used, either separately or in combination. (2) If the program is set up on an activity basis or on a modified activity basis, the unit may be followed through by showing the significant points.

B. *Extra-curricular activities*—Activities of the various clubs, varsity sports, safety patrol, student council, and other activities which pupils engage in under school supervision, but which are not included in "The curriculum in action."

C. *The supervisor's contribution*—If the part the supervisor plays in the total educational program is important it should be interpreted for the public. A picture could be made which would show how the supervisor works with the teachers to improve instruction.

D. *The administrator's contribution*—The administrator's main contribution is in having the physical facilities in readiness so that learning can take place. A picture showing this could include such activities as schedule making, inspection of buildings and classrooms, meetings with the board of education, ordering of supplies, and all other important services of the administrator.

E. *The physical property of the school*—Buildings, playgrounds, and equipment should be shown in relationship to their functions. A contrast between an old building and a modern one should prove effective.

F. *The janitorial staff*—The most important contributions of the janitorial staff is in keeping the building in a healthful condition. The picture would show all the activities of the janitorial staff.

G. *The school board*—The school board is the representative of the public. A motion picture could show a member of the school board being elected, a school board meeting, the school or a new building, interviewing a prospective teacher, and inspecting new equipment. Somehow its relationship to the school should be shown.

H. *The county and state officers of education*—Many of the public do not understand the services which are rendered by the county and state officers of education. Many times the school must turn to the state department for help. While there may not be enough material here for a complete picture it could be included with another.

I. *The social service work of the school*—A picture on this phase of the school's work might show the activities of the school nurse, the cafeteria in operation, the dental clinic, the T. B. clinic, pre-school health check-up, and other related activities which are necessary for a smoothly running school.

J. *The community*—The school probably uses the community resources as a part of its curriculum. The school journey to the different parts of the community for the purpose of collecting information to solve a problem would make excellent material for a motion picture.

This is in no sense a complete list of motion picture subjects nor is it meant to be a specific list. The motion picture production schedule should be a definite part of the total public relations program, and what motion pictures will be produced during the year will depend entirely upon this total program.

The standards of honesty and dignity apply no less to motion pictures than to the other phases of the public relations program. In the production of motion pictures there is great danger that too much emphasis will be given to the spectacular activities and those which

Glenwood Junior High School, Findlay, Ohio

(The pictures in this article are enlargements from the school-produced film "A Day at Glenwood")

are relatively easy to photograph. If the motion picture is to be used at all it must be used honestly, or the public will soon discover that the school of the screen is not the school the children of the community attend.

The difficulties of using the motion picture in a public relations program are mainly of a technical nature. The equipment that is necessary to produce and project motion pictures involves significant expenditures. To get good motion pictures, there is necessary a thorough understanding of the fundamentals of photography, of lighting equipment and its use, and much time must be spent in careful planning. These difficulties were not serious enough to prevent production by the thirty-eight schools studied in this thesis, and over half of these schools were able to cut down expense by borrowing the needed equipment. Practically all of the schools have their projectors. Most of them had at least one member of the staff whose knowledge of photography was sufficient to shoot adequate motion pictures. All took some time to plan and produce their motion pictures and the evidence shows they considered their time well spent.

Chapter III
Introduction to Study

The remainder of this thesis is a study of what has already been done by thirty-eight schools in Ohio who are using the school-made motion picture as a public relations agent. Not all the schools in Ohio doing this work have been reached, but there is reason to believe that the list secured is more than a majority.

After securing the names of the persons and schools conducting such work (see Appendix[1]), the next step was to send each of them a questionnaire (see Appendix) which was designed to attempt to discover what is being done, how it is being done, and the nature of the results. The material for this report is based upon the information given in the questionnaire replies.

This report is meant to serve both those who do and those who do not use the school-made motion picture as a public relations medium. The former may get some knowledge of what others are doing, and perhaps secure some useful ideas. The latter may find that the results of successful programs are enough to justify attempting a program of their own.

The writer has been unable to discover any previous studies which could be termed parallel to this one. However, there has been one nation-wide survey study which attempted to discover what types of motion pictures were being made by the schools (see Appendix) and there have been may studies dealing directly with publicity films, but limited to the program of a single school or school system (see Appendix).

Chapter IV
Equipment, Cost and Financing

The purpose of this chapter is to show what type of motion picture equipment is being used, in some instances its cost, and how it is financed.

Camera. The camera is one expensive and indispensable item of equipment. Some say that the cost of using the camera is prohibitive, but it may often be borrowed or rented. Then, too, cameras need not be bought new, as there are many good used cameras on the market which can be had for a reasonably low price.

Of the schools here considered, there are 5 using the 8mm camera, and of these one school owns, while 4 do not. There are 35 schools using the 16mm camera

[1]Space limitations have naturally compelled abridgement of this thesis. The Appendix, containing list of the 38 schools and directors, the elaborate questionnaire used, and reference tables are part of the complete thesis obtainable only by application to the author.

of which 17 own, while 18 do not. Nine of these 35 schools using the 16mm camera did not report the cost of their cameras. There are 3 schools using both the 8mm and 16mm camera; one school owns both, while the others own neither.

The school-owned 8mm camera cost $91.00. Schools not owning the 8mm camera report a high of $45, low of $35, and a mean cost of $42. For the 16mm cameras owned by the school the low is $45, high $525, and mean cost is $151. For schools not owning the camera the low is $35, high $700, and mean cost is $190.

Sound. Only 4 schools of those reporting made pictures with sound-on film. There are 16 schools using their amplifying systems or some similar device, to give sound accompaniment to their pictures. The remaining 17 showed silent pictures, using no mechanical sound device.

Projector. All but four of the schools report that the projector is owned by the school. In each of the four cases where the school does not own the projector, it is owned by a staff member.

Lighting. In reply to the question "What lighting equipment if any, did you use?" 31 schools mentioned using some type of lighting equipment. It is very difficult to obtain good interior pictures without using artificial light; therefore, it is gratifying to note that out of 37 schools, 31 used this equipment. The problem of how to get enough light is far from solved, however, as 18 schools mention lighting as their chief difficulty.

Financing. Since most Boards of Education are probably unwilling as yet to finance the film program,

A student announcer at the microphone

the administrator is usually forced to find some method or a combination of methods for raising the money.

Of the variety of methods used to finance school-made films, admissions to noon movies was mentioned 9 times, admissions to school-made films 8 times, funds of schools clubs or general fund 14 times, donations from community groups and individuals 2 times, board of education 6 times, personal donation of principal and teachers 5 times, admissions to school assemblies and entertainments 5 times, and candy sales, etc., 2 times.

The question of financing seems to be an individual difficulty which must be worked out by the schools themselves. It is often serious, however, for some pro-

Traffic boys escorting students across the street

grams have been either stopped or curtailed because of lack of funds. Finding sufficient time to photograph the motion picture was often mentioned as being the chief difficulty in film production. This seems to be a question of relative values. If the administrator after careful evaluation, comes to the conclusion that the film program is worthwhile, he will find the time for the production of motion pictures.

Chapter V
Amount, Cost and Projection Time of Films

How many feet of film have been produced by these Ohio schools? Not including the cost of equipment, what did it cost to produce this film? How long would it take to project all the film reported? The answers to these questions will not only give one an idea of the mere quantity of film produced, but will open the way for a broader interpretation of the content section of this study.

The 34 schools reporting on this question have produced 45,900 feet of film. Since they were asked to report only on the three of their school-made pictures which they had shown most frequently, the 45,900 feet of film represents minimum. The total footage of school-made film in Ohio is not shown. Table I shows the types of film which make up this 45,900 feet and also their cost and projection time.

Table I

Type of film	Footage	Cost'	per Foot	Projection Time in Hrs.
16mm silent	39,400	$3,010	$.75	26½
16mm sound	3,900	370	.09	1½
8mm	2,600	117	04	3½
Total	45,900	$3,497		31½

Much more than a majority of the schools are using the 16mm silent film. Although this costs three and one-half times more a foot to produce it is probably the more satisfactory for school use. Most schools own a 16mm projector and can use it to project the film. If 8mm film is used it means that an 8mm projector must either be bought or borrowed. The 16mm film has one big advantage over the 8mm film in that it can be made to yield a larger image on the screen and, therefore, can be shown to more people at one time.

(To be continued)

An Undeveloped Mine of Materials for Visual Education

How pictures from current magazines are used by a science teacher, employing the opaque projector to great advantage.

PROFESSOR JOHN PAUL GIVLER
Head, Department of Biology, The Woman's College of the University of North Carolina, Greensboro

DURING the so-called "dark ages" in Europe the illiterate condition of the masses stimulated the enterprising Charlemagne to found a system of public education which may be considered the parent of our present schools. All that the Great Charles had to build upon was the scholastic training of the medieval church monks. It was a backward-looking sort of education, standing in great contrast both to the intellectual freedom of the Greeks of Pericles' time and also to the humanistic revolt which swept Europe after the renaissance.

In spite of all of the liberality which has come into our theories of education as a result of Greek influence, humanitarian conceptions and science, it must be confessed that much in our modern schools remains essentially cloistered and scholastic. This continues true, also, in defiance of the work which the psychologists have done to capture the formula of "the learning process" and make education "scientific."

The movement for "visual education" seems to be a part of the protest against the traditional and the purely scholastic in the world of teacher and student. As I understand the matter, what is meant by "visual" education, is largely, *pictorial* education—for it is an open secret with most teachers that comparatively few people are able to *read* in any true meaning of the term. The public glance at the papers and scan the headlines but they do not read editorials or closely-knit articles in the better magazines. The stock excuse is that they are too busy — also given for not reading *books*.

Fifty years ago the late Frank A. Munsey founded *Munsey's Magazine* which was the first popular periodical to my knowledge to be published on the theory that the public could make more out of pictures than text, for its issues were filled with good illustrations. That journal came to an end, as most magazines do sooner or later, and the idea which inspired it seemed to lie unappropriated, in this country, except for the always splendid *National Geographic Magazine* which occupies so well its own special field. European magazines which forshadowed our American pictorials are *The Illustrated London News* and the French paper *L'Illustration*. Then, suddenly, over here, appeared *Life*, followed by *Look*, *Click* and some others less prominent or less enduring.

So far as I can observe, the flowering of all of this pictorial material has been too hidden to be appreciated properly or utilized in any adequate way by those who seek pictures to tell a story. If one were an architect, giving a course of popular lectures on housing, one could readily find in the picture magazines much directly to the point. The same would be true of a history professor giving an extension course in current events. The applicability of much of this general material to specific and multifarious projects is amazing. As though to give still further help the more conservative magazines, yielding to competition, have now both increased the number of their illustrations and also added color to them.

The teacher having a classroom equipped with a good opaque projection lantern now comes to view the rotogravure sections of Sunday papers, the picture magazines and other similar material in a new light. And the enlargement of suitable figures by this device, as they appear on the screen in a darkened classroom, gives them also a new *life*, a transformed and enhanced value. A little experience and experimenting with trial pictures will give clues as to what is good and what is better and, at the same time, sharpen the eye and the mental appetite for more of them. Many of the offerings are reproduced from photographs taken with nearly priceless lenses and by the best of photographers. The result is rare animals of the zoo, tropical plants in their native haunts, or the new 200 inch telescope for Mount Palomar.

The good teacher knows the inestimable value of a good picture shown to a class to illustrate a certain topic at just the right time. The present author began experimenting with this teaching device about twenty-

Mounting pictures on cards of various sizes, shown in background

five years ago with the well-known Perry Pictures and then with those found occasionally in the magazines of that period. Some of our experience in this connection may be of value to others and it is for this reason that it is recorded here.

As an example of the way in which newspaper and magazine pictures serve as effective teaching devices allow me to describe the following incident. I open my copy of the *New York Times Magazine* and find there a well-illustrated article on the cathedral at Chartres, France. As I am a biologist you will probably ask, "What in the world can that mean to you?" Now it does happen that I earn my living teaching biology, but I have found that I can do that task best and most helpfully by cultivating a sympathetic understanding of a thousand other things. Biology, or chemistry, or physics, or geography, are subjects of very wide relationships with all manner of other aspects of human life.

Regarding the Chartres cathedral I happen to recall at once, on seeing the picture, that it displays on a panel of stone carvings of its south porch a beautiful figure of the plant known as the columbine, a fact referred to and illustrated by Charles Singer, the English biological historian, in his work entitled "The Story of Living Things." That carving, produced about A. D. 1260, brought back to public eye and notice the freshness and beauty of a living thing because the figures were copied faithfully by the sculptor from the flowers in the French meadows. The smell and feeling of the natural plant were his as he drew his outlines and chiseled his leaves and flowers. If you will compare this captured natural charm, preserved for us in stone for now these seven centuries, with the degraded and senseless copyings in herbals of the same period, you will see how significant a contribution to biological art was this work on this very building. For these reasons I save this picture but my particular interest in it does not preclude the possibilities of its use by a teacher of French, of history, architecture or religion, as those interested in visual education may well understand. We not only save the picture but we make it into a permanent mount, as later to be described, and store it in a filing cabinet.

Many pictures, such as the one referred to, found in magazines, newspapers, circulars and other literature, are ordinarily glanced at once on Sunday and thrown away on Monday morning. Many from the sources named are, of course, without value; but the genius of the broadly trained and discriminating teacher, Y. M. C. A. secretary, personnel director or librarian lies in knowing "gold" when he sees it. The right picture shown in a class at just the right time may bring interest and clinch realization as well-written words may fail to do. Moreover, young people take hold upon studies with avidity when they can see that schooling is not a thing for the locked exhibition case, but rather, that it consists in realizing the meanings and relations of apparently unrelated and commonplace things around them.

Our picture collection has been dug from just this mine. Students and others bring me a few, but for the most part, they are caught from out the piles of the apparently meaningless and irrelevant by keeping my own "weather eye" constantly on the lookout for something

Selecting mounted pictures from the files

apt. Frequently I buy a magazine just for one picture. We harvest the items desired and usually discard the rest of the magazine. It is important to record all data at once in ink on the margin. The pictures may be mounted at once or laid away in portfolios or Manila folders until one has time for the mounting process.

To mount pictures for direct inspection, projection on a screen with the opaque projection lantern, or for framing, we use a rather heavy light gray Plain Process Mat Board supplied by the National Card, Mat and Board Company, 4318 Carroll Avenue, Chicago. The stock we now use is designated as Style No. 934 Plain Process Board, 18 ply. Size, over all, 18x44 inches. For mounting our pictures we have it cut into four sizes—5x8 inches, letter size, legal size and 14x22 inches, on a power paper cutter. This is much better than to have no two cards of the same size and saves much hard work with knife and ruler. In mounting the pictures we use a good grade of library paste but freshly made flour paste, to which about one per cent of common alum is added, is really better. We use rubber cement also with some pictures. As it contains no water the rubber product causes no pulling or warping of the cards but it probably will deteriorate sooner that the starch or dextrin pastes.

No matter what adhesive you use it is better to paste the picture down all over than merely to "tack" it by the edges or corners. Very important, also, is proper trimming before mounting. This is best done with a stiff backed, single-edged, razor-blade and a long steel straight-edge, although a good brass-edged ruler will serve. Pictures should be cut straight, with proper margins, and mounted straight and neatly on the card, otherwise the collection will look homemade and amateurish. Although pictures, such as we use, are gathered from all sources, the collection as it stands arranged in a four-section legal-size, letter-file, has a certain definite unity.

For our purposes in a department of biology we give

each card two numbers, one in Roman, lettered in black ink on the upper right corner, and another in Arabic on the lower left. The Arabic numbers run continuously and correspond to similar ones in the accession book where data concerning the source of the entry and other facts are recorded. Neither this device, nor the book, is absolutely necessary. Nearly indispensable, however, is the system of Roman numeral designations corresponding to a scheme of classification which, for our collection, comprises fifty heads from I (General Biology) to L (Miscellaneous). Between the two we have many titles, corresponding roughly to the conventional systems of plant and animal classifications, with others such as Organic Evolution, Genetics and Paleontology. In the tills of the files the cards stand separated by pressboard guides topped by three-staggered metal label holders in which the typed titles are inserted.

A collection of the kind described is not only a permanent acquisition to the resources of a department for visual education. It is also a growing, revisable and adaptable thing. There is scarcely any limit to the size, scope or character of pictorial material it may be made to receive and hold in readiness for instant use. There is a definite place in the files for every new picture and, after use in the classroom, the Roman numeral tells at once the place to which it must be returned.

In using the pictures with a projection lantern we find that some papers and certain processes of illustrations show up more effectively than others. To gain knowledge as to pictures, ink or cards, as well as the best kinds of screens, one may make many interesting experimental studies the results of which should bring out improvements on the methods here outlined.

We have gone far enough, however, in collecting, mounting, classifying, and in the projection of the kinds of pictures described, to know that nearly all are good, and, if displayed to students at opportune times, will go far in helping to clarify a subject and give it vital interest.

It is our concluding hope that this "mine" of nearly untouched materials for visual education will pay big returns to many teachers and others who should find broadening of interests and pleasure in working it.

A Study of the Comparative Effectiveness of Three Methods of Using Motion Pictures in Teaching(1)

A carefully controlled study of classroom values of sound films with results conducive to further research.

JOHN ELMORE HANSEN
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Chapter I

Problem

THE study reported herein is an attempt to determine the relative effectiveness of three different methods of using motion pictures, produced as talking motion pictures, in the teaching of several specific topics (1) with respect to the factual information gained directly from the picture and (2) with respect to the ability of the pupils to apply the knowledge thus gained to new situations.

The addition of sound to the motion picture has confronted educators with new problems. Since nearly all educational sound motion pictures are talking pictures, that is, pictorial continuities accompanied by oral lectures which explain, enlarge upon, and bridge the gaps in the pictorial presentation, it is apparent that there may be a conflict between the oral lecture of the picture and the efforts of the classroom teacher to present the pictorial elements of the picture as an integral part of what is being taught. It may also be questioned whether the method of teaching incorporated in the talking picture is psychologically sound.

It is conceivable that the quickest method of transmitting factual information to others is through a combination of showing and telling, which is essentially the method employed by the talking motion picture. Especially would it seem that this might be so for purposes of immediate verbal recall. If learning is to have much value, however, it must not only have some degree of permanence, but it must make provision for the transfer of training through the proper development of concepts which are rich in content. It seems to be the opinion of most educational psychologists that education should concern itself more largely with the proper development of rich meanings or concepts and that if this is done transfer of training will take care of itself. Does the talking motion picture promote learning on this higher level? Does it promote the kind of learning which bestows the power to deal with new situations? Is the spoken continuity of the sound motion picture a help or a hindrance to learning? The determination of the effectiveness of this broken continuity, and the determination of the most effective class-room methods in the use of talking pictures are problems which need additional study. The writer's purpose in conducting the study reported herein as stated above was to help remove some of the uncertainty that exists regarding the effectiveness of the mechanically recorded verbal continuity of educational talking

motion pictures both as it affects learning and as it affects the transfer of training.

Chapter II

Previous Investigations

Experimental studies in the educational use of motion pictures were begun about twenty years ago. In 1918 one of the first published studies, by David Sumstine,[1] appeared in School and Society. Studies by Freeman and others[2] at Chicago and by Weber[3] at Columbia appeared during the succeeding five or six years. The University of Chicago studies under the direction of Freeman were intended to show the function of motion pictures and to determine their superiority, if any, over other types of visual aids and non-visual methods. Thirteen studies were reported in this series. Weber's study was devoted largely to discovering the relative values of the motion picture, lantern slide, and other types of visual aids.

These earlier investigations were handicapped by a paucity of well planned and well constructed motion pictures, and, because of this lack, their results and conclusions would hardly be considered valid today. However, they were an excellent beginning in the objective study of the educational motion picture and set the stage for more comprehensive studies that followed.

In 1929 Wood and Freeman[4] reported the results of an extensive investigation to determine the contribution of motion pictures when used as an integral part of classroom teaching procedure, in (1) motivating pupil activity in relation to the subject studied, (2) effecting factual learning, (3) improving descriptive processes, and (4) promoting understanding of causes, effects, and relationships.

In the same year Knowlton and Tilton[5] reported the results of an investigation of the effectiveness of the Yale Chronicles of America Photoplays in (1) motivating greater pupil activity and classroom participation; (2) improving knowledge of historical chronology and geography and personages, casual relationships, etc.: and (3) improving permanency of learning. In 1932 Knowlton and Tilton[6] also made a study of "The Auditorium vs. Classroom Showing of Motion Pictures in History Teaching."

In 1933 the writer[7] conducted a study in two Wisconsin school systems to determine the permanency of learning through the aid of motion pictures.

The motion pictures used in those four last named studies differed from those used in the previously mentioned in that they were constructed specifically for instructional purposes.

The first experimental study involving educational talking pictures was reported in 1932 by Clark[8] of New York University. This was followed in 1933 by Studies by Arnspiger[9] at Teachers College, Columbia University and by Rulon [10] at Harvard. In 1934 Westfall[11] reported the results of a study at Teachers College, and in 1936 the writer[12] reported a study conducted in Wisconsin.

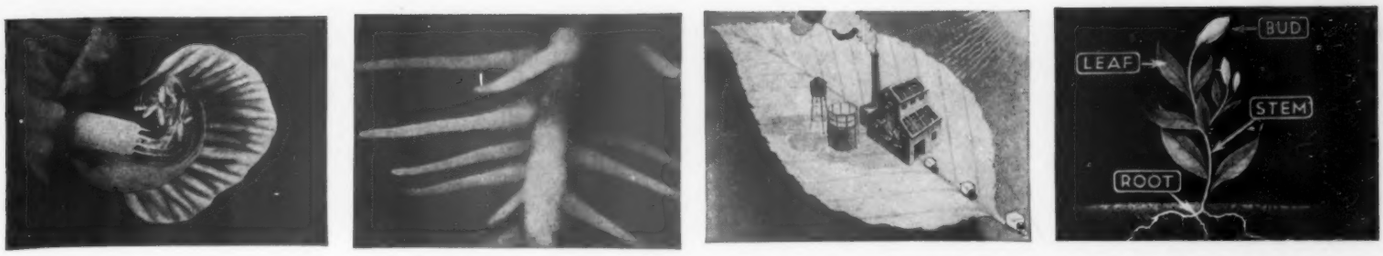
The purpose of Arnspiger's study was: (1) to determine by experimentation the relative effectiveness (a) of teaching with the aid of certain educational talking pictures in the fields of natural science and music in grades 5 and 7 respectively and (b) of the usual methods of classroom instruction: (2) to make an analysis of the composition elements of certain scenes of the talking pictures used in the experiment, this analysis being treated in such manner as to serve as an introduction to the study of the relative effectiveness of these elements of composition. He found that the talking pictures used in the experiment made marked and lasting contributions to learning both in natural science and in the music units and that these contributions were made without the loss of learning the other elements of subject matter of the units not included in the talking pictures themselves.

Rulon attempted to evaluate the educational effectiveness of the sound motion picture in the teaching of ninth grade general science as compared with the textbook method of teaching the same subject. He found that the teaching technique employing the motion picture film was 20.5% more effective from the instructional standpoint than was the unaided presentation. He found also that the retained gain of the film group was 38.5% greater than that of the control group. However, the results of Rulon's study must be considered in light of the fact that the control group was limited to the textbook, all the laboratory aids and devices ordinarily used in the teaching of the subject apparently being barred, while the experimental group enjoyed the benefit of the textbook plus the motion pictures.

The other four talking picture studies listed above dealt wholly or in part with a comparison of the effectiveness of talking pictures and silent motion pictures and with various methods of presenting verbal continuities with pictures.

Clark attempted to determine the effectiveness of talking motion pictures as compared with two other types of teaching aids, namely, silent motion pictures and lecture demonstrations. His investigation was carried on with college freshmen in the subject of science. He studied two phases of the problem of evaluating the use of sound motion pictures: the relative values of such pictures as a means of (1) conveying concrete knowledge or information and (2) stimulating and maintaining interests. His conclusions were essentially as follows: (1) That realistic and vital sound films were as effective as identical lecture demonstrations in conveying specific information of a scientific nature to mature students, (2) that silent films did not appear to be as effective as identical classroom demonstrations for developing specific knowledge on the part of junior college students, (3) that sound films of the strictly lecture type with an offstage voice were not as effective as identical silent films with printed captions in conveying specific information, (4) that the three methods of presentation were about equally effective in maintaining interests, and (5) that the sound picture was more effective in stimulating a present interest.

Westfall's study was concerned with an evaluation of the relative merits of the following forms of verbal accompaniment to educational motion pictures: (1) no explanation, (2) average length titles, (3) long titles, (4) average length titles plus teacher comment, (5) teacher lecture, (6) talking picture, (7) teacher-prepared explanation. He found in the case of films originally constructed as silent films with the usual captions that (1) the teacher explanation prepared by the



The above illustrations are from the following Erpi films, reading from left to right, "Plant Growth," "Plant Roots," "Leaves," "Flowers at Work."

teacher from materials furnished with the films, (2) a lecture furnished with the film and read by the teacher, and (3) the usual captions, were about equally effective in aiding the pupils to understand the contents of the film: and that these three forms of verbal accompaniment were superior to long captions and to the regular captions supplemented by teacher explanation: that for films constructed originally for use with sound accompaniment a mechanically produced lecture was superior to the same materials printed on the film or to an explanation prepared by the teacher. He also found oral forms of verbal accompaniment very helpful to pupils of low ability, that they helped them in keeping nearer to the average of the class than when the reading of titles was required.

The writer's purpose in his study, "The Verbal Accompaniment of the Educational Film — The Recorded Voice vs. The Voice of the Classroom Teacher" was to compare the effectiveness of the verbal continuity accompanying the talking picture (1) when presented mechanically through the medium of the recorded voice and the sound motion picture projector and (2) when presented by the teacher simultaneously with the picture projected through a silent projector. The study was conducted in the field of biology, and four motion pictures in this field were used. The subjects included seventh and tenth grade pupils and they were taught by their regular classroom teachers. The results of this study, contrary to the findings of Westfall, indicated that the verbal continuity accompanying an educational picture of the talking picture type can be presented as effectively by the classroom teacher as through the medium of the recorded voice and the sound motion picture projector.

Chapter III
Procedure

1. *Materials of Instruction*

The talking films used in the first part of the study are *Plant Growth, Plant Roots, Leaves,* and *Flowers at Work,* produced by Erpi Classroom Films, Inc. They are essentially silent films accompanied by a spoken verbal continuity. They cover in detail the life cycle and the biological processes of a number of typical plants. In comparing the effectiveness of silent motion pictures with that of talking pictures it would ordinarily be unfair to use as silent films the talking pictures with the sound omitted, because a well constructed silent film would employ devices such as captions and animated words and arrows as explanatory devices instead of the spoken commentary. However, the four above pictures make good use of all such explanatory devices, with the exception of captions, in addition to the verbal continuity. Animated words, arrows, and other devices are used throughout the pictures to designate parts and to call attention to biological processes going on in each scene. All of these films are accompanied by well planned study guides which were made available to all of the teachers.

For the second part of the study two silent films, *The Green Plant* and *From Flower to Fruit,* produced by the Teaching Films Division of the Eastman Kodak Company were used. These films cover approximately the same biological processes which are covered by the first four films, but employ different plants. This made it possible to determine the relative effectiveness of the three different instructional methods used with the first four films in helping pupils to comprehend similar but new situations which were presented in the last two films.

All of the sound films are approximately eleven minute reels and the silent films fifteen minute reels and are designed for the junior and senior high school level.

2. *Subjects*

The subjects consisted of 334 pupils in the ten second semester biology classes of the tenth grade in the Oshkosh High School. Because of considerable absence caused by illness the number of subjects used in the first comparisons was much reduced. Much of the subject matter covered in the films had been studied during the first semester, which accounts for the relatively low gains on some of the final tests. The ten classes were divided into three groups A, B, and C and each group taught by one of the methods described below. They were taught by the five regular teachers of the biology department. An effort was made to divide the classes taught by each of these five teachers as evenly as possible between the three experimental groups. The division of the classes into the three groups was based on their intelligence quotients, chronological ages, and mental ages as given in the table below.

TABLE I

Number of Subjects, Mean Chronological Ages, Mean I. Q., and Mean Mental Age

	Subject	*Ave. C.A.*	*Ave. I.Q.*	*Ave. M.A.*
Group A	59	189.2 Mo.	104.1	197
Group B	68	188.5 Mo.	104.0	196
Group C	68	187.8 Mo.	102.8	193

3. *Tests*

The tests each consisted of twenty questions of five items each. These five individual statements might all be correct, all wrong, or some correct and some wrong. This made really 100 items for each test and eliminated the guessing factor to a considerable extent. A number of the questions were based on diagrams contained in the tests. The same tests were used for pre-tests as for the final tests. Although there might be some element of practice in this procedure, the same treatment was

(Continued on page 74)

MOTION PICTURES—NOT FOR THEATRES

Installment Number Sixteen—devoted mainly to the origins of the slide-film and the stirring success story of Jam Handy of Chicago and Detroit

By **ARTHUR EDWIN KROWS**
Editor of "The Spur," New York City

THAT Wilding, with due regard for his astuteness, picked Detroit because of all places in the United States it was best for non-theatrical production, is too much to suppose of any person not gifted with an unearthly sense of prophecy. It conforms more with normal human events to suppose that Wilding was just lucky. Even the juxtaposition of New England and the Detroit area was natural enough, for the former was supplying most of the machine tools used in the heavy manufactures of the latter; and there was a constant flow of materials back and forth and mainly in the direction which Wilding had taken.

The fact remains that the city Wilding had selected for his establishment was, in the next few years, to rival New York—and in many respects to outrival it—as a fruitful ground for industrial film production. One thinks of New York as the great marketplace but, while a marketplace may have the experts who dictate methods of sales and of sales promotion, the manufacturers of the goods to be sold also have influence in such matters, especially when the goods are of new sorts and the market has not been thoroughly plumbed and tested. Manufacturers of this type, exerting such power, were astonishingly many in the Detroit area.

But in that area was Chicago, a city seemingly much more important than Detroit. Why didn't Wilding establish himself there? That question I cannot answer precisely; but Wilding still made the better choice. Chicago was primarily a marketplace. Detroit, on the other hand, commanded the greatest heavy manufacturing section in the country.

In New England the manufacturers were much closer grouped but, by habit and tradition, they were far more conservative than these Midlanders with their newer industries and their still newer methods of persuading the public to buy. In the North Central States, as the school geographies sometimes like to call the other region, business had not yet been fully proved. It was not cut and dried. The manufacturers were of necessity open to novel ideas and untried systems and, if their advertising agencies in the East advised them against the use of motion pictures, the factory men were likely to act contrary to that counsel sheerly on the ground that the case of the non-theatrical movie had not yet been proved, either.

Draw a circle of two hundred and fifty miles from Detroit as a center, and there are included Chicago, Milwaukee, South Bend, Indianapolis, Dayton, Cincinnati, Pittsburgh, Buffalo, Cleveland, Akron, Toledo and scores of other factory points. Increase the spread to four hundred miles, and you have Springfield and Louisville—and the national capital, Washington, D. C. Another hundred miles, and St. Louis, Nashville, Philadelphia and New York swell the roster. However, what is of chief importance lies in the first-named ring, including the hearts of the tremendous rubber, oil and steel industries. For the greater part a level country, with straight roads for automobile caravans, bee-lines for railroads, broad fields everywhere for airports, and a seaway to Europe through the Great Lakes and the St. Lawrence.

I am stressing, of course, the importance to the non-theatrical producer of selling his clients by being close to them. Before one may have his stew, as the saying goes, he must catch his hare. But, looking at some other aspects of Detroit, one is obliged to confess drawbacks—the Lake Country sunshine is broken at short intervals by driving clouds disturbing to cameramen and greatly lengthening the costly production period; the land itself lacks picturesqueness and variety for extended location work which normally would save studio expense; costumes and properties of other lands and periods are difficult to obtain; the nearest large film processing laboratories are in Chicago, and, above all, there is only a meager supply of actors. But in this business, one thing offsets another and, if the manufacturers wished primarily to see on the screen the raw materials entering their machines at one end and the completed products emerging from the other, there was in Detroit no great need of studios, actors and attractive outdoor locations.

Lo and behold, however, the manufacturers here were obsessed by no such thought. Unlike factory men in older lines, they had been obliged to organize, along with ways of refining materials, creating and assembling their products, complete systems of sales and distribution; and they appreciated the values in those respects more keenly than did their own nominal representatives in the marketplace. For the sake of having picture production directly under their eyes where they could guide and correct it, they were easily willing to pay the increased costs of importing the missing factors. So, as the next few years were to show, there came from Detroit a heavy volume of sales pictures, their prices raised to a point where the producer could maintain his self-respect and in technical matters challenge comparison with Hollywood. Whether the stabilization of sales systems, involving automobiles, radios, automatic refrigerators and so forth, will ultimately result in swinging Detroit production to New York, remains to be seen.

With circumstances so immediately favorable, so near at hand, the non-theatrical producers of Chicago naturally endeavored to profit also. It was a Chicago enterprise, entrenched in Detroit, which was to give Wilding his stiffest competition.

Author's Note — **The manifest impracticability of reviewing a huge mass of research—accumulated over many years and requiring more than 20,000 index cards to catalogue it — means that the Editors of Educational Screen have accepted the manuscript of this long history mainly on faith. In the circumstances, the Author assumes full responsibility for all statements of fact and expressions of opinion herein, at the same time that he invites corrections and emendations for the betterment of the record when it is published eventually in book form.**

Jam Handy Picture Service

THIS firm was headed by an old acquaintance—Jam Handy, erstwhile salesman for Bray. In August, 1929, Handy was advertising "fourteen years of successful experience in making industrial motion pictures and lighted still pictures for sales education and service instruction"; but how much of the experience had been with Bray and how much was divided between the industrial motion pictures and the "lighted still pictures for sales education and service instruction" was not stated.

Bray Studios was not incorporated according to notices in the motion picture trade papers until December, 1914; so Handy, assuming the correctness of this quoted account, was dabbling in films a year later. Still, one can never be positive about these claims of experience, even granting their honesty. I recall one concern, in business for less than two cycles of the seasons, which claimed seventy-six years of experience by totalling the time spent individually at film-making by five or six persons employed. The Bray version is that Handy was in charge of the Bray Chicago office and that, when he began to promote his personal enterprises, the connection was broken.

It seems to me that I once heard Handy remark that he had started in motion pictures through his interest in animated cartoons; and, of course, in Chicago in 1913 to 1915, Essanay and Selig had their staff

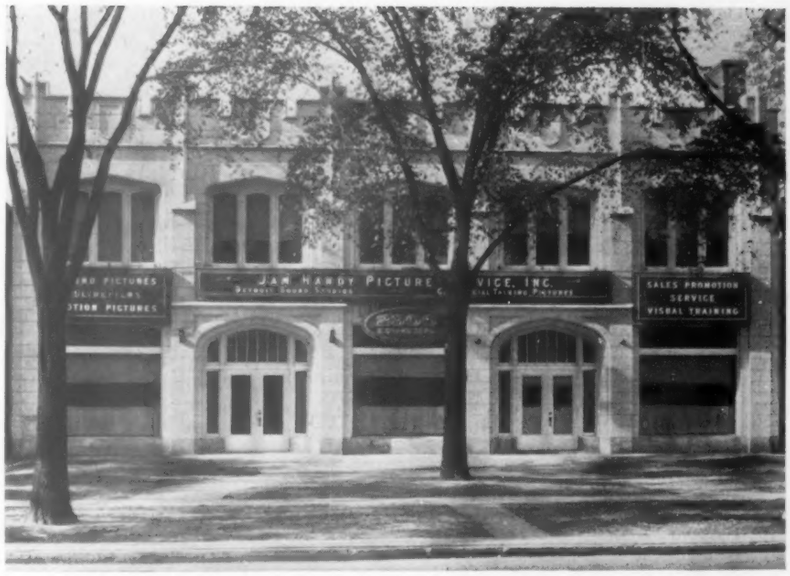
animators with plenty to say about Bray's curb on their "free" methods. It would have been quite natural for Handy, as a newspaper comic strip editor, not only to have dabbled then in the local situation but to have been well acquainted with Bray. But, without further speculation on that point, my records show that a Kelly-Handy Syndicate was incorporated at Chicago in the spring of 1917 by William Matthew Handy, Jamison Handy and Otto C. Bryhlman, to manufacture and deal in motion picture film. The capitalization was $2,500.

It was not until almost ten years later —about 1926—that the non-theatrical field in general became aware of Handy's advertising as denoting something extraordinary. At that time his concern was called the Newpapers Film Corporation; and he was claiming "regional and service representatives at principal points throughout the U. S." The Newspapers Film Corporation already had budded into an enterprise called the Jam Handy Picture Service, which leased films and full show equipment to its clients; and this grew until, early in 1929, the former name was completely superseded and dropped from all advertising.

Nevertheless the discarded name was significant, for the Handy family was very well known in Chicago journalism. As the "Newspapers" title implied, Jamison had been making capital of his contacts. His father, Moses Purnell Handy, had been director of publicity for the World's Columbian Exposition; his elder brother, William Matthew Handy, had been for many years an editor of the Chicago *Herald and Examiner* and the Chicago *Tribune*, and his younger brother, Ray D. Handy, had attained celebrity as a cartoonist. Jamison, himself, had become, as aforesaid, an editor of newspaper comic strips, which must have taught him a great deal about visualization, simple, direct story-telling, a careful judgment of public taste, and of what references to avoid, invaluable aids in the line he was to follow. As a strip editor, incidentally, one of his greatest triumphs is said to have been the discovery and development of the late Elzie Crisler Segar, creator of "Popeye the Sailor."

Particular interest is engendered by Handy's reference to "still pictures for sales education and service instruction," for this apparently was the real basis of the Jam Handy Picture Service. It remarks also, a striking by-product in non-theatricals, one, indeed, which was considerably to help the field as a whole. It was an item known more commonly today as "slide film"—meaning a device to project individual frames of motion picture film to achieve the same results formerly attained by lantern slides—successions of still pictures. With a small roll of fifty or sixty different scenes thus photographed on a short strip of 35-millimeter standard theatrical film (on which, in the usual positions, they run sixteen to the foot), a lecturer could carry in his pocket illustrative material for a full hour's talk — provided, of course, that he had also a suitable projector.

Handy had such an instrument, a compact, inexpensive little affair which could



The Jam Handy Studio in Detroit, from a photograph made about 1929. A remodelled church, with offices in front and the stages and workshops in the rear. Over and over through the centuries the drama has been fostered by the church, but probably never more literally than this.

be taken out of a desk drawer and plugged into a convenient light socket for immediate operation. He had in this apparatus a useful aid in sales demonstration, employee training classes and the like, as he claimed; and, once similar projectors had been purchased by customers who could use them, he might hope to supply the operators with a regular service of slide films. The plan, put into practice, worked out so well that in 1929 the Jam Handy Picture Service in Chicago employed approximately one hundred and fifty persons to stage, photograph, market and ship slide films, the gross monthly business, it is said, running to a return of about $60,000.

Ancestors of the Slide Film

Odd devices such as the Handy machine usually have long, involved beginnings; but we do know that the slide film was not generally known until about 1923-5, when several forms of still projectors, including that of the Spencer Lens Company and the S.V.E. Picturol, were placed on the market. About ten years earlier, in the spring of 1914, the New York optical firm of Herbert & Huesgen had advertised a combination of camera and projector for this sort of exhibition; but apparently it was ahead of its time and then met with little favor. The photographing device was called the Tourist Multiple Camera; and it was said to have a capacity of seven hundred and fifty pictures without reloading — meaning, in terms of regular 35-millimeter film, a roll approximately fifty feet long. The separate projector did not seem to have enjoyed a distinct name and was clearly assigned a subordinate place.

Of course, from very early days, many a regular motion picture projector has been made to stop and show a single picture on the screen, and the tiny, toy projector called the Pathé Baby, or Pathex, imported from Paris, had an ingenious way of running the motion picture but holding the title still on one frame to save film. But the earliest slide film projector, starting the trend upon which Handy was to ride at full tide, that I recall, was the Brayco, manufactured for and distributed by, Bray Products. The earliest certain date I have for it is 1918 —a reference in a Government bulletin. It was about the size of, and not much heavier than, an ordinary desk telephone of the period. It was cleverly constructed, cheaply made and nominally priced, being designed for home use of the rich variety of subjects in the Bray film library. Street gossip had it that the Brayco was what really gave Handy his profitable idea in that line. And that may have been true, especially because the basic principle seems not to have been patentable. But, if Bray had made a low-priced device for the home field, Handy had a better one designed and manufactured for his more exacting industrial clients.

Bray has his own explanation of how his own projector started the slide film movement. "It is a fact," he wrote me in September, 1939, "that I invented and developed the first film slide projector and made up the first film slide type of film.

> "The machine was called the Brayco. We made up one-half dozen projectors by hand, and I sent a speaker to the N.E.A. Convention in 1923, I believe it was, at San Francisco, where we put on a demonstration before the assembled educators. This Brayco film and projector made an immediate hit, and forthwith the Spencer Lens, S.V.E., and others started in the same field.
>
> "It was impossible for us to get basic patents on the projector. We could only obtain design patents. Of course it was very easy for anyone to make up such a projector with a different design, so by the time we got well into production, we had competition from all sides. We made up 150,000 Brayco projectors which we sold at $25.00 each in less than two years time.
>
> "About this time the 16mm. film was brought out by the Eastman Kodak Company, and we being essentially motion picture minded,

and realizing that the 16mm. motion picture could now sell for less than half of the price of the old 35mm. film, and that projectors that were fool-proof using fireproof film were becoming available, decided that we would go out of the production of Brayco projectors and devote our interests from then on to the development of a 16mm. educational film library."

Much distressed over the appearance of the Brayco, and especially so because among the subjects listed for projection with it appeared an adaptation of "The Science of Life," was Dr. Maurice Ricker. Here, in turn, is that story in Dr. Ricker's own words, taken from a letter to me in February, 1939, and beginning the narrative late in 1914, when he was principal of the Des Moines High School:

"I had been making single frame prints from my science pictures and projecting them as stills. I sent samples to Morton [Morton Bassett, owner of the McIntosh Company of Chicago], and he thought that I should make patent application. So he furnished the money. The claims were not well drawn and, after the usual delays, some claims, such as a remote control, etc., were allowed. . . . Later (in 1921 or '22), I spent some weeks at the Spencer Lens Company in Buffalo, helping develop the projector. Our patent was taken out in '14 or '15 (tho' conceived and worked on earlier) while making the 'Science of Life' film for the USPHS, which I wrote and directed (12 reels) and on which Bray obtained the contract.

"I had around Bray's Studio (Carpenter & Goldman unit, before their independent organization was launched), a slide film holder, such as Bassett and I used. It was a revised slide holder, with spools on either end.

"We played around with it, and it was left lying around for several months. Imagine my surprise a year later, to see in the show windows of camera supply houses, a large printed card bearing the advertisement, 'Bray's Latest Invention' . . . and my 'Science of Life' in still frames was on the market. . . . This induced me to join Mr. Ott (Spencer Lens president) in getting out the Spencer and the adapter for lanterns. I would like for you to publish some time the patent which I will furnish you."

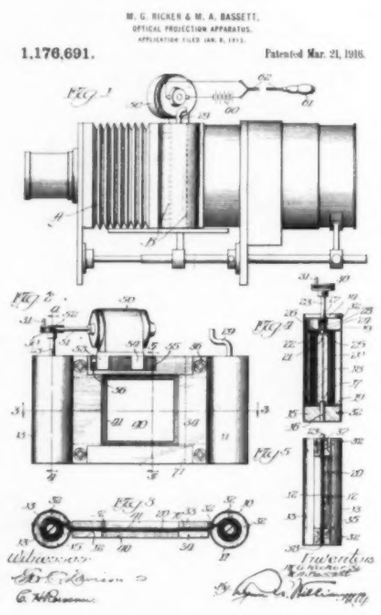
Dr. Ricker duly sent me a copy of the Patent Office specification, and from it are here reproduced his illustrative drawings. The complete specification was filed January 8, 1915; it was witnessed December 24, 1914. Still, that Herbert & Huesgen advertisement of the Tourist Multiple Camera was published in *The Outlook* even earlier—May 23, 1914. Who, then, was the actual father of the slide film?

As far as America is concerned, probably Dr. Ricker. And if the inventor of the Tourist Multiple Camera antedated him, Ricker's fame is still secure as the distributor of an exceedingly valuable innovation. The appearance of the Brayco, following his intimate association with Bray Studios, gives weight to his own belief that he unwittingly suggested it, and it is a fact that he developed the slide film projector for the Spencer Lens Company. If one accepts then the view that Handy's projector was inspired by the Brayco, there is indicated Dr. Ricker's part in four distinct slide film devices, counting his own. He it was who introduced slide films to the U. S. Department of Agriculture, where they have been extensively used ever since, about 1922. Surely with all this, Dr. Ricker deserves an honored place in the temple of visual education.

But why was it that Bray decided that there was no money for him in the Brayco and discontinued its production, while Handy went ahead with another device of the same sort and reaped a rich reward? First, perhaps, was the temperamental difference in the men; but a leading reason also, no doubt, was the contract won by Handy to supply dealers of the Chevrolet Motor Company, everywhere, with slide films.

The Handy Circle

Handy's particular friend at Chevrolet was Richard H. Grant, president of the company; and their friendship remained steadfast throughout many troublous years which followed.


M. G. RICKER & M. A. BASSETT.
OPTICAL PROJECTION APPARATUS.
APPLICATION FILED JAN. 8, 1915.

1,176,691. Patented Mar. 21, 1916.

Patent specifications by Maurice G. Ricker and Morton A. Bassett for a slide film projector, dated December 24, 1914. The papers were filed at the Patent Office January 8, 1915

As in all such cases, charges of favoritism were rife. One persistent account had it that Handy had married Grant's sister. After a time, it was said, Grant issued a statement, on Handy's behalf, that he never had had a sister. Then the story was amended to say that it wasn't Grant's sister but the sister of his wife, whom Handy had married and, when Handy denied being wedded to Grant's sister-in-law, rumor replied that the reason was that Handy had divorced her But what matter? As long as Grant received service up to standard in every respect—and it appears amply that he did—what matter whether the person with whom he dealt was a friend, his brother-in-law, his uncle or his aunt?

Whatever the detailed circumstances of the friendship may have been, Grant's high regard surely opened Handy's way to success in the film field. Grant was destined to become director of sales and one of the most powerful vice-presidents in General Motors Corporation, which comprised some eighty allied companies—manufacturing not only automobiles but a variety of by-products ranging from golf bags to airplanes. To all of these affiliates Handy would have entrée with exceptionally favorable credentials, and, naturally, he did not hesitate to use them. His own concern thus expanded rapidly. Elaborate offices were opened and regional sales and service representatives were appointed in other cities—New York, Cleveland, Dayton and Detroit—and, of course, it was an easy matter to step from slide film manufacture into regular motion picture production.

To understand the non-theatrical importance of being endorsed by R. H. Grant, one must turn the clock backward briefly to the first decade of the century. Then Grant was one of the fabulous circle dominated by John H. Patterson, in the National Cash Register Company at Dayton. Others in that devoted, remarkable group, were C. F. Kettering, present head of the General Motors Research Laboratories; Charles Lee, today chief engineer for Chrysler Motors; Edward A. Deeds, now chairman of the executive committee of the United Aircraft and Transport Corporation, and Hugh Chalmers, later director of the Chrysler Corporation of Detroit.

Even in that pioneer period John Patterson had been a great believer in the non-theatrical uses of motion pictures and, as was habitual with him, he had put his beliefs into practice. Those of Patterson's company who arose later to command other great concerns, would naturally be receptive to the approach of a film man endorsed by one of their own number, especially if that associate had a business judgment which they particularly respected. It was even more significant that Handy had made films in 1920—studies in wasted motions—for Patterson himself. It is easy to see from this how largely John Patterson was responsible for the happy non-theatrical circumstances throughout the whole Detroit area, and why, indeed, Detroit was, from that standpoint, so much ahead of New York.

In developing movie production, Handy, of course, did not relinquish his lucrative slide film business in Chicago; but, while he continued that, he decided upon Detroit as the logical center for his new work. Accordingly he rented a suite of offices in the fine new General Motors Building in Detroit, and installed there a small projection room. The room was for the convenience of General Motors officials who might not wish to travel over the half-dozen blocks to the converted church, further along East Grand Boulevard, which was now the Jam Handy Detroit studio. At the same time the studio became, as Handy surely knew it would, a fascinating exhibit to show prospective clients who had "always wondered how they do it in the movies."

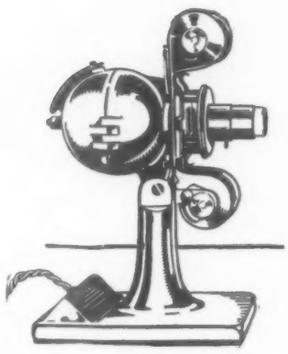
It was Jam Handy's idea from the beginning to supply a complete motion picture service; so his workers not only variously wrote scenarios and produced

pictures, but they negotiated print sales, inspected and repaired reels in use, and actually put on the shows. They sold projectors, too. The resident manager in charge of production at the studio was Oliver Horn, a vice-president of the company, brought over from Chicago. Horn was something of a swimming star—a strong point with Handy, for he, himself, had hung up several laurels for amateur performances in the water. Another vice-president stationed at Detroit was Ben Turbett, old-time Edison director. Handy's brother-in-law, John Strickler, was treasurer; but he remained most of the time in Chicago, where he was in charge of the slide films. To care for the exhibition phase, Perry Warren, who had had a small but thriving business in supplying film shows from Dayton, was taken on. The sales manager was George Haig. He is said previously to have resigned a $25,000 a year job as executive in a large industrial concern, merely because he did not approve its operating policy—a form of resignation repeated about 1933 when he abandoned Handy.

But probably the most intriguing figure of all, next to Handy himself, was the Reverend Ralph Lee, formerly an official in the Frigidaire plant at Dayton. He was a brother of Charles Lee, chief technical expert at the Chrysler factory, and himself the inventor of some important automotive devices. He it was, they say, who designed the particular slide film projector exploited by Handy—probably at his home workshop which he mischievously called the Domestic Engineering Company of Dayton. Being a wealthy man, Ralph Lee bought a heavy interest in Handy's enterprise. He participated actively in it as far as Handy would permit. But he also kept up his activity as a minister in the little church at Dayton, to conduct the services of which he frequently flew over from Detroit in his own airplane. His title in the Handy company was sales promotion manager, although this seems not to have interfered in the least with the ceaseless activity of the admirable George Haig.

Handy's principal business was with General Motors. Among his other, more casual clients for silent pictures were: The Curtis Publishing Company, Johns-Mansville, the Bankers Trust Company of New York, the General Electric Company, the Celotex Company, the American Surety Company, the General Outdoor Advertising Company, the Elgin Corporation, makers of street-cleaning equipment; the Coca-Cola Company and Cantrell & Cochrane, Ltd. As one goes over the list it is interesting to note the absence of automotive accounts other than General Motors; and here is the key to the success of Handy's competitors in the area. The man who held the General Motors business could not hope to have also the patronage of rivals of General Motors. Even Chrysler, with Charles Lee in a position to refer business to his brother Ralph, did not noticeably appear, therefore, in the Handy roll-call.

Wilding was the lucky man to find Walter Chrysler and to make him a star



Picture of the Brayco, from an advertisement of the Chicago distributor, the Brayco Company of Illinois. The accompanying text describes it as the "latest invention of J. R. Bray, originator of the animated drawing"

client. He also found Studebaker, Dodge and the Graham Brothers—also the public utility companies and the oil people. So he was not so badly off. He found, too, an old church, not so well situated, perhaps—down on Mullet Street, in the older part of the city near the Michigan Central Railroad station—but ample for his purpose, which was to serve his clients as completely as might be done by anyone else. In accordance with that policy he also began a slide film business on the side. And his enterprises, all together, waxed deservedly strong.

With the jealousies and suspicions of one client toward another, there was even enough business on the margins for a few lesser industrial producers. Chief among these was Morris J. Caplan, president and general manager of the Metropolitan Motion Picture Company, over on Cass Avenue, Detroit representatives of the International Newsreel. Arthur Caplan, a younger brother, was his vice-president. They claimed a start in 1919, when Morris had been joined by another brother, Sam, who retired in 1931 because of ill health. Then, in the Penobscott Building, there were two other brothers, the McConvilles, calling their concern Professional Films, Inc.

In the handsome city of Cleveland, on Euclid Avenue, was William Scott, with his Art Films Studio, which had 21,000 square feet of laboratory and studio space. Cleveland had been the scene of much motion picture activity in the early days; but the companies virtually all had been ambitious for theatrical honors. The Argus Company, which in 1917 had produced a history of the city in association with the Cleveland *Plain Dealer*, was so inclined despite its avowed interest in educationals and industrials; and the Reserve Photo Plays Company, arising to public view in August, 1916, with announcements of a film for the General Electric Company entitled, "Flame Eternal, a Drama of Light and Love," fairly showered the press, before the month was out, with promises of theatrical activity, including one that it might merge with the Selig and also with Essanay.

R. H. McLaughlin was head of Reserve; but he now took on in addition the presidency of the Success Film Company of Cleveland, which was "conservatively" described as a $7,500,000 corporation to produce motion pictures and to present them in its own theatres—the first soon to be erected in New York City. "Flame Eternal," by the way, was "probably" to be produced in Los Angeles. Even Watterson Rothacker was impressed. He traipsed over from Chicago one day for a chat with Johnny Ray, the general manager of Reserve—and, experienced in publicity methods as he was, he must have been surprised to see even that casual fact blazoned promptly forth by the Reserve press department.

So Jam Handy and Norman Wilding remained the bright particular stars of industrial motion picture production in the Great Lakes area. When we reach the story of the development of talking pictures, they will appear again.

Chicago

Detroit is so clearly the key city of this great manufacturing region, that its name denotes manifestations of giant industry everywhere in it. In Europe, as in America, "Detroitism" means the unprecedented, twentieth century manufacturing operations there to be seen. Chicago is the railroad center of the modern phases of industry—on the whole, quite distinct. There the interests include transportation, too; but it is the railroad, opposed to the automobile of Detroit. Chicago is the railroad center of the world. It is also the world's greatest meat-packing, grain and agricultural region of those States which are drained by the northern tributaries of the Mississippi.

The non-theatrical producer situated in Chicago consequently was unfitted through sheer environment to break importantly into the Detroit area, as the Detroit producer necessarily had a cast of mind unsuiting him to more than an occasional foray into the Chicago area. Jam Handy would seem to be a contradiction here; but bear in mind that in his best years he kept his motion picture business wholly—save laboratory work—in Detroit, and his slide film manufacturing business altogether in Chicago.

(To be continued)

Next Month

The serial adds to the roster of the commercial producers of America, preparatory to taking up the specialized interests in non-theatrical production and distribution. Less than one-third of the story has appeared in consecutive issues of The Educational Screen since publication began in September, 1938, and continuation will be exclusively in these columns. Subscribe now.

In and for the Classroom

Conducted by Wilber Emmert
Director Visual Education, State Teachers College, Indiana, Pa.

Safety Education —In Hand Made Lantern Slides

ESAU MOTOVICH
Art Department, State Teachers College, Indiana, Penna.

INTRODUCING safety into the classroom through the medium of the hand made lantern slide is not only an interesting method of presenting safety, but is an inexpensive and effective one.

The following slides afford a fine opportunity for the instructor to give a discussion for the purpose of promoting safety within the class. After projecting the slides onto the screen, the title should be read, then followed with a discussion of facts, information, and incidents on the subject.

The teacher will experience little difficulty in drawing the following safety pictures, which are reproduced in proper size for slide making. It will be still more effective to let the children trace the slides, not only for the experience of making slides, but for the opportunity to participate in a safety program where they will gain more lasting impressions of the practices presented by drawing and discussing safety measures with the instructor. While showing the slides, the teacher can lead the discussion on the slide theme with class participation.

Never Play with Matches. Throughout the country each year there are many cases of physical impairment, and even death, attributed to the misuse of matches. In the first place, the instructor can point out the danger of damage to property by throwing the lighted matches about. Secondly, there is always the possibility of catching one's clothes on fire or endangering the safety of a playmate. With these thoughts in mind the instructor can localize his discussion to the two figures on the slide. The boy playing with the matches may not suffer any mishap, yet his innocent playmate may be the victim of a carelessly thrown match. After explaining the danger of such actions, it can be pointed out that in any case where a child accidentally catches his clothes on fire, he should put it out by rolling in a blanket, rug, or something which will smother the flame. In the meantime the children should be encouraged to ask questions concerning fire alarms, fire drills, and fire prevention. At this point several factors can be brought out in regard to fire drills. First, the children should file out of the building orderly when the signal is given. Secondly, an older student or the teacher should assume the responsibility of closing all the windows and turning the lights on before leaving. After a discussion of these points, it is well to go back to the key message of the slide; then amplify the importance of the statement by asking the children to always observe this rule and to influence their playmates to do the same thing.

Pick Up All Dangerous Objects. During the course of a school day, the student may find himself in a position to exercise this suggestion. The instructor should encourage the pupils to pick up pencils, or other small objects which have accidentally fallen on the floor. Even the smallest objects, such as pencils, pebbles, marbles, lolly-pop sticks, and the like, may prove dangerous. It is not uncommon to read that someone has fallen down a flight of stairs and seriously injured himself as a result of skidding on some small toy, or even a match stick. This slide shows a boy picking up broken pieces of glass and boards with protruding nails. It will be noted that he is wearing gloves to protect his hands while doing this work. It should be even better if he swept the objects into a pan, then deposited them in the receptacle provided for such things. One should be sure to protect himself from injury while doing the "good deeds" of this sort. If this lesson of picking up all dangerous objects is encouraged in the classroom and at school, the student will undoubtedly carry the practice into the home.

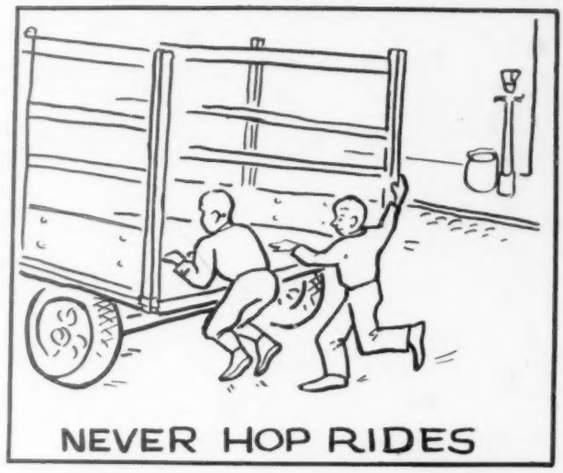
Never Hop Rides. We will venture the assertion that no youngster ever hopped rides for the purpose of objective travel, but rather for the thrill of "swiping" a ride. This assertion is based on the contention that he generally does not know where the auto or truck is bound; therefore, he hopped on for the thrill of getting a free ride. Hopping rides occur continually in every community, but this practice is extremely dangerous for several reasons. First, one may fall while climbing onto the truck. Second, he may injure himself while jumping off the vehicle at the end of the ride. And finally, there is the possibility of jumping into oncoming traffic. This discussion can be directed to the dangers as illustrated on the slide. If possible one should try to point out similar incidents which may have occurred within the community; and also tell of the disastrous results of such unnecessary practices.

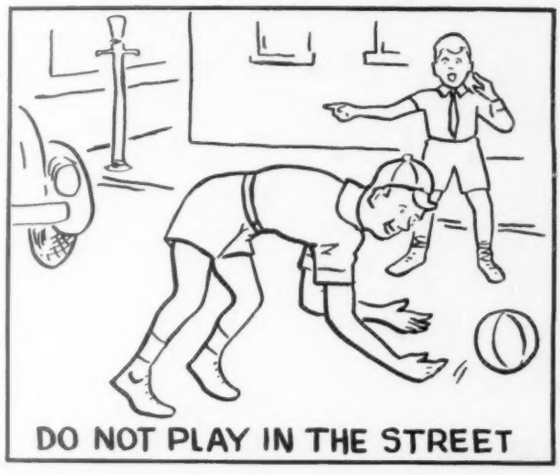
Do Not Play In the Streets. This particular subject is a difficult one in the sense that often the children have no other place to play but in the street. We might suggest that this argument should be regarded lightly, since in the larger cities there are playgrounds, and in the smaller communities vacant lots customarily used for play purposes. Any child can find places to play other than on the dangerous street. In this slide two boys are playing in the street. One youngster darts after a ball, while the other warns him of an oncoming automobile. The result is inevitably an accident from the approaching vehicle. It is true that the driver has had time to see the child, but it should be stressed to the children that this is not always the case, and that they should refrain from playing in the streets. This slide affords a splendid opportunity to show the smaller children the importance of staying on the walks at all times, and never stepping off the curb unless told to do so by some older person. Playing in the streets has caused numerous accidents, and thus the children should know the street is a danger zone which must be avoided except in the event of crossing at street corners and other designated crossings.

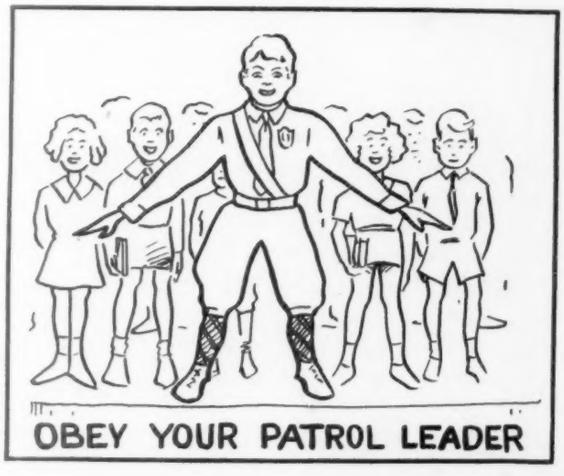
Obey Your Patrol Leader. In the past few years the school boy patrol has become a vital spoke in the wheel of safety promotion. These patrol leaders find that they are in a better position to talk to the youngsters understandingly, and that the children in turn can speak with the patrol leaders more easily than they can with an older person. This is a vantage point for safety education, since the patrol leader speaks the language of the youngsters. The children should be taught to respect the position of the patrol leader and obey them to their own advantage. Disobeying a patrol leader may result in an injury to the child. The children are forming fine habits when they wait on the curb and are instructed as to how and when to cross the street. The patrol leader can readily explain to the children the importance of the traffic policeman, who is in reality their friend and helper. The children should be taught never to fear the policeman, but rather to look forward to his assistance in safeguarding their lives. Likewise the patrol leaders should recognize their responsibility and the importance of their position in the promotion of safety education in the school.

Ride on the Right Side—Observe Traffic Rules. With the increasing popularity of the bicycle, we find our

(Concluded on page 77)







Among Ourselves

Notes from and by the Department of Visual Instruction of the National Education Association.

Conducted by Charles F. Hoban, Jr.
American Council on Education, Washington, D. C.

NOW comes Dr. John A. Hollinger, Director of Science and Visualization of the Pittsburgh Public Schools, with a new title for the catalog of his division which holds promise of being the neat turn of phrase that has been sought for two decades. The November-December, 1939, number of *Pittsburgh Public Schools* has appeared as the "Catalogue of Aids to Perceptual Learning." Apart from its title, this is an extraordinary document. It appears not as a catalog but as a complete issue of the regularly published professional magazine of the Pittsburgh Schools, reaching the desk of every teacher as a matter of course, and appearing in a series devoted to important developments in all matters educational as these matters affect all the Pittsburgh schools.

The title of the volume is bound to stir a good deal of discussion, comment, and constructive criticism. Drop a note to this column before March 15, in care of Charles R. Hoban, 1013 18th Street, N. W., Washington, D. C., indicating whether you like or dislike the term and why, and offering miscellaneous suggestions. The correspondence on the subject will be reviewed in the April issue of the SCREEN—barring wind and high water.

WHILE we're on the subject of Pittsburgh, be sure to attend the meeting on "Evaluation and Use of Audio-Visual Materials in the Classroom," scheduled at the Webster Hall and Foster Memorial Hall (Pittsburgh), April 19 and 20. There are several things about this conference that indicate the direction in which leaders of the field are leading the field. In the first place, the committee in charge of the conference consists of the superintendent of schools of Allegheny County, the director of science and visualization of the Pittsburgh schools, the head of the department of education and the film library at Pennsylvania College for Women, and a professor of education of the University of Pittsburgh. These are in turn, Dr. Charles Dickey, Dr. Hollinger, Dr. C. E. Manwiller, Dr. James S. Kinder, and Dr. Herbert Olander. Dr. Kinder is chairman of the committee. Only lately have committees planning conferences on "visual" materials drawn personnel from administrative, curriculum, and related departments.

Another valuable feature of the conference is that it is organized around curriculum problems and subjects, rather than around visual aids. There will be conferences on reading, English, science, and consumer education, in which contributions of visual materials and methods will be discussed in relation to objectives which have been set up in these curricular areas.

An evening session will be devoted to new films and the social studies. Following a general discussion of the documentary film, and the screening of *The City* and two housing authority films, there will be a panel discussion of the importance of these films to the social studies curriculum, and the place, if any, that these films have in the classroom. Those school authorities who have experienced the pressure for and against the school showing of films related to the work of local housing authorities will recognize the importance of this topic on the general program. This discussion will be led by Dr. E. A. Dimmick, Associate Superintendent, Pittsburgh Public Schools.

Other features of the conference program include discussion of slides in the teaching of geographic relations and concepts, a review of developments in scientific aids to teaching English, and a review of developments in the release of theatrical shorts and edited feature films for classroom use. Speakers on these subjects will be Dr. Zoe Thralls, University of Pittsburgh; Dr. Walter Ginsberg, Teachers College, Columbia University; and Dr. Carl W. Milliken, Motion Picture Producers and Distributors of America.

The conference will conclude with a joint luncheon meeting with Phi Delta Kappa devoted to the theme, "Some Contributions to Human Relations." Speakers will include Mr. James Stokley, director of the Buhl Planetarium and Institute of Popular Science, and Dr. Milliken. There will follow a panel discussion led by Mr. George W. Culbertson, of the Herron Hill Junior High School.

DON'T fail to attend the sessions of the Department of Visual Instruction at St. Louis. Added to the program printed in the January issue of the SCREEN is a joint dinner meeting with the Association of School Film Libraries, February 28.

ANOTHER St. Louis meeting of interest to members of the department is being arranged by Pres. John A. Bartky and Dr. William W. Wattenberg, Chicago Teachers College, 6800 Stewart Avenue, Chicago. The meeting will be held under the auspices of the Society for Curriculum Study for the purpose of providing channels for communication among teachers especially interested in the use of school excursions and other direct utilization of community resources. Replies from letters sent out by a group of Chicago teachers who developed the idea of a national planning committee indicate that "there is a need for a group which would engage in such activities as: publishing a bulletin containing information on the successful use of various types of school excursions; helping to arrange long-distance excursions; stimulating and coordinating efforts for the improvement and evaluation of school excusions" (*Curriculum Journal*, II, 1:4-5). If interested, write in advance to either President Bartky or Dr. Wattenberg.

SPEAKING of school journeys, Arnold Beichman, formerly of the editorial staff of *The New York Times,* is making a systematic study of school journeys in the United States for the Progressive Education System, under a grant from the Sloan Foundation. Lincoln School, you remember, experimented with school journeys a year or so ago, under a grant from the Sloan Foundation, and the educational aspects of the journeys were evaluated by Dr. Louis E. Raths, Bureau of Educational Research, Ohio State University, and published in the Bureau's *Educational Research Bulletin.* If you have any data on school excursions, Mr. Beichman would be glad to hear from you, in care of the Progressive Education Association, New York City.

A Clearing House for School-Made Public Relations Films

WILLIAM G. HART
Harvey H. Lowrey School, Dearborn, Mich.

AT LEAST ninety motion pictures have been produced for the purpose of interpreting the schools to the public. This fact will be of significance to every administrator who has been confronted with a public apathy to speeches and school visitation and largely uninterested in the school columns of the newspaper.

There can be little question that the number of school-made films will continue to grow. Interest in motion picture production on the part of educators has mounted rapidly. But will the quality of these films keep pace with the increasing production? The answer to this question hinges in part on the extent to which we make available to schoolmen information as to techniques and possible areas in the field of film production.

It was with a view to bringing about such an exchange that a nation-wide survey of public relations films has been carried out by the writer during the past year. This project is a direct outgrowth of the meeting on publicity films at the 1939 A.A.S.A. Convention. Administrators attending this meeting expressed the need for a loose organization through which they could exchange ideas, scenarios and films. In line with this expression, a questionnaire was prepared to gather essential film information. Opportunity was provided for recording title, length, width, whether silent or sound, film content in detail, availability for loan, and the name of the individual to whom correspondence should be directed. This form, together with a letter explanatory of the purpose of the survey, was mailed to a gradually expanding list of educators interested in the field. In all, 214 questionnaires were sent to schoolmen from a list compiled with the help of the various state Education Associations, The National Council of Teachers of English, The National Education Association, The Bureau of Educational Research of Ohio State University, The Department of Visual Instruction of the Oakvale (W. Va.) Schools, the movie publications, and the suggestions secured from educators previously responding.

Data on 90 films was assembled in the first Public Relations Film Bulletin distributed to all those teachers and administrators who contributed to or expressed interest in the project. Certain facts are outstanding in the information thus far:

1—The large majority of educators who replied were definitely interested in an exchange organization such as that proposed and were willing to loan their own films to other schoolmen.

2—The "Newsreel" type of film (usually a group of school highlights, often unrelated) continues to constitute the great majority of the films produced by schools for public relations purposes. Many of these films have a running time of well over an hour (as high as 2¼ hours!) and are sometimes literally, as described by the administrators concerned, "all the activities of the school" and "everything from the opening of school in the fall to graduation in the spring."

3—There is a discernible trend, however, toward a more highly "specialized" film whose purpose is to present in carefully-planned detail some single aspect of school life. Films such as *Cactus Courageous* (an eighth grade class studies cacti), *Early Denver, T. B. Testing Program, Nursery School, Busy Hands, Introducing Your Library,* and *Our Children Learn To Read* are typical of this trend.

4—All films (with the exception of one 8mm. subject) were of the 16mm. type. Approximately one film in five made some use of natural color film.

5—Sound films are being used experimentally by a few schools. (Four such products were reported in the survey.) Notable examples of sound films are the 1600-foot Bay City (Mich.) picture, on which a commentator's voice was recorded after the film had been edited, and the 400-foot Croton-On-Hudson (N. Y.) film *School,* with sound recorded on the spot.

While the survey has undoubtedly provided a certain amount of information of value in itself to the educator interested in film production, the primary purpose of the project remains that of encouraging the exchange of films and related data. And unless through this exchange there comes about, however slowly, a greater enthusiasm for and understanding of school film production, together with a product of increasingly good quality, the project will have failed in its mission.

(*Editor's Note*—The interesting data on the 90 school-made films assembled by the questionnaire will be given in our succeeding issues, probably as a portion of the new Department of "School Made Motion Pictures" which begins in this number.)

SCHOOL-MADE MOTION PICTURES

Conducted by HARDY R. FINCH
Head of English
High School, Greenwich, Conn.
Member Committee on Standards for Motion Pictures and Newspapers of the National Council of Teachers of English

WHAT schools and colleges are making and have made films? What kinds of films are they making? What do the films contain? What are some of the unusual developments in this field? How do the schools produce their films? These questions and many others have been sent to me since the beginning of a survey of school-made films in 1938.

This column will endeavor to answer some of these questions, but first of all, it will serve as a record of films made by schools. While information on new films is being compiled, films already reported to me will be mentioned. The data given for each film has been checked for accuracy; however, in spite of this, an occasional error may be noted. Readers of the column will be of great assistance if they will notify the editor regarding any necessary changes in text or any additional films for future listings.

The "newsreel" and activity films comprise the majority of the films produced in schools at the present time. Many of them are used by schools for public relations purposes. Most of these films have been made on 16mm film and, unless otherwise specified, films mentioned in the following paragraphs are of that width. Also, it may be understood that all films are black-and-white and silent, unless "color" and "sound" are expressly mentioned.

California—Color films of a school fiesta have been produced by the Woodrow Wilson High School Moving Picture Club at Long Beach. With some shots of football games, the club's shooting results total almost 900 feet.

Connecticut—Edward F. Wheeler, chairman of visual education at Bristol High School, describes his activity film, "School Activities," as consisting "merely of glimpses of classroom work, club activity, and some athletics." (400 feet)

One release of "Hillhouse High-lites," New Haven, a newsreel of school events (1000 feet) shows how the school's newspaper is produced. Donald Eldridge, director of visual education, is advisor of the production group.

A "sportsreel" containing shots of track meets and football games (400 feet) has been produced by the Cinema Club of Staples High School, Westport.

Florida—"A Day at Sealy Memorial School" (100 feet), and "The Tallahassee May Party" (200 feet) were produced at Sealy Memorial School, Tallahassee. Robert C. Moon is the principal.

Georgia—The O'Keefe Junior High School Camera Club, Atlanta, has made 400 feet showing the school's cafeteria, inauguration of the school's president, and tree planting. H. M. Williams is the club's advisor.

A film which paid for itself is "My Diary," an activity film produced at Jordan Vocational High School, Columbus. F. P. Bradford, principal, writes, "We paid for the film by selling advertisements and using them in the film." (1200 feet)

Iowa—"Ames High on Parade" is the subject of a 1500-foot film produced by the Science Club of Senior High School, Ames, under the supervision of John Harms.

Kentucky—A 400-foot film taken by interested parents, is described by Ninde S. Wilder, principal of the Ballard Memorial School, Louisville.

Louisiana—All activities of the St. Charles Parish Schools, Hahnville, are included in a 1200-foot film, as reported by Supt. J. B. Martin. A 400-foot film on the activities of Hahnville High School were produced under the direction of E. J. Landry, principal.

Maryland—An Armistice Day celebration film (200 feet) is one of three short films produced at the Southern Junior-Senior High School, Baltimore, under the supervision of Nicholas DeCesare.

Massachusetts—W. B. Gifford, principal of the High School at Belmont, reports the making of a 100-foot film on a football game.

"Briscoe Movies," a film of activities (400 feet), and

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a film of a W.P.A. Nursery School (400 feet), have been made by Frank A. Rhuland, Briscoe Junior High School, Beverly.

"A Day in Our Nursery School," a film showing a day's routine—health inspection, work with materials, play equipment, lunch, rest, etc.—(400 feet) is reported by Miss Pauline Fricat, Lancaster Street School, Leominster.

Nebraska—An 8mm film on school activities (100 feet) has been taken by the Camera Club of Lincoln High School.

New Jersey—"Vineland-Landis Township Schools in Action" is a 1600-foot activity film made in Vineland. Dr. Lawrence R. Winchell is the Vineland Superintendent of Schools.

A Senior Washington trip and athletic activities are shown in a film (400 feet) by the Camera Club of Hamilton High School, Trenton. L. F. Rader is the club advisor.

New York—Six junior High school pageants 1930-36 form the content of 1200 feet of film made at Glens Falls High School.

Ohio—Euclid Central School, Euclid, has made a film entitled "A Day in the Euclid Schools." According to Principal H. L. Shibler, the film is 1100 feet in length and its "scenario is based on the activities in the school, such as physical education, athletics, dramatics, and musical organizations."

A 400-foot reel on football and 200 feet on May Health Day are recorded by A. L. Baumgartner, principal, Harvey High School, Painesville.

"A Century of Educational Progress in Maumee" (1600 feet) is an activity film shown at the 1938 commencement exercises in Maumee, according to H. H. Eibling, Superintendent of Schools.

Oklahoma—An unusual title, "Growing Up in Okmulgee Schools," identifies a film (2000 feet) about the Okmulgee Public Schools. Activities shown in this film include nursery school, classroom activities, exhibits, and commencements of High school and junior college.

Pennsylvania—The Benjamin Franklin Junior High School, Uniontown, now owns 1400 feet of an activity film, made during a three-year period.

The activities of the practical arts department of the Northwest Junior High School, Reading, have been filmed by Lester Sheirich.

Texas—An outdoor spring pageant film (400 feet) is reported by Miss Emma Gutzeit, Board of Education, San Antonio. The Douglas Junior School for Negroes, San Antonio, has made a school activity film (400 feet).

Virginia—The school buildings, grounds, and activities of the Madeira School, Greenway, have been filmed. The 2400 feet of film were taken by the school's physical education department.

Washington—A film sponsored by a local Education Association and the Longview Board of Education has been shown to many service and civic organizations. It is called "Sally Ann's Day at School" (200 feet). Miss Pearl Heidenrich was the production manager of the film.

Wisconsin—An 800-foot film on the activities of the work of the Kenosha Orthopedic School has been produced at Kenosha.

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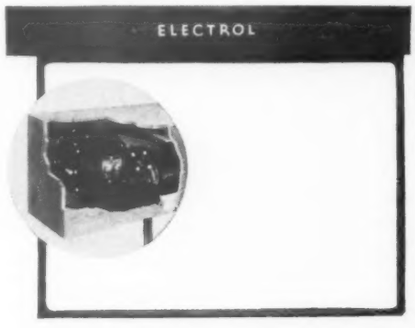

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The Federal Film

Edited by Arch A. Mercey
Assistant Director, U. S. Film Service,
Washington, D. C.

Microphotography for Educators

GEORGE A. SCHWEGMANN, Jr.
Director Photoduplication Service
Library of Congress

(*Editor's Note*: A slight departure from the usual news and comment on Government films is presented this week with a discussion of the problem of microphotography. Mr. Schwegmann has written this article especially for EDUCATIONAL SCREEN as a contribution to an understanding of the new and growing science of microphotography.)

DURING the past several years, the attention of progressive educators and scholars has been centered to a large extent on the fabulous accomplishments of microphotography—a technique so new that there was no steady periodical reference to it before 1936. Since this date the literature has grown so rapidly that a new quarterly, *The Journal of Documentary Reproduction*, dealing principally with microphotography, appeared in 1938.

The photographic reproduction of printed and manuscript materials is not new. Photocopying or photostating techniques have been widely used and are still ideal for short transcriptions and certain classes of material. Complete volumes and longer studies, however, can frequently be microfilmed for less than the cost of photocopying a limited selection of the same material.

Although the chief users of microphotography are business firms and government offices, a very respectable proportion of the total is employed for the preservation, duplication and dissemination of educational material. As educators become more familiar with microphotography, this new form of duplication will be increasingly employed by them, both as media of research and as visual aids to learning.

Briefly, microfilm is the product of successive exposures on 16 or 35mm safety motion picture film of manuscript, printed or graphic material. The resulting images are read either through a magnifying glass, by enlargement on the screen of a reading machine or as enlargements on photographic paper. The essential novel feature of microphotography is that the facsimile image is tiny and comparatively inexpensive. Of the three suggested means of reading microfilm, the reading machine or wall projector is most widely used. Reading devices can be purchased at prices ranging from about $20 to $325.

Because of their relative cheapness and compactness, microfilms have been adopted to solve various large-scale documentary preservation and storage problems. Instances of such use are the microfilming of the Social Security Board records, the NRA hearings, bank checks, department store accounts, newspapers, European archives and rare books. It is estimated that several billions of microcopies have already been made.

Large-scale copying operations however are not the only grist for the microfilm mill, for as librarians have assumed the obligation of preserving research materials on film, they also have accepted the responsibility of providing scholars with microfilms of required materials in their custody. Thus it is now possible to secure from most large libraries of this country film copies of practically any material they have at costs varying from 1 to 5 cents a page. A list of these microfilm sources is appended. In addition to material in the United States, scholars also may secure, through University Microfilms, Ann Arbor, Mich., and other sources, microfilms of materials in many libraries in England, France, Germany, and Italy.

The advantages of microfilm to the scholar are obvious. From the standpoint of original research, microphotography places those in the most isolated institutions on an equal footing with students working in immediate proximity to complete collections. Indeed, microphotography permits the distant research worker to assemble in his own study, at modest cost, the

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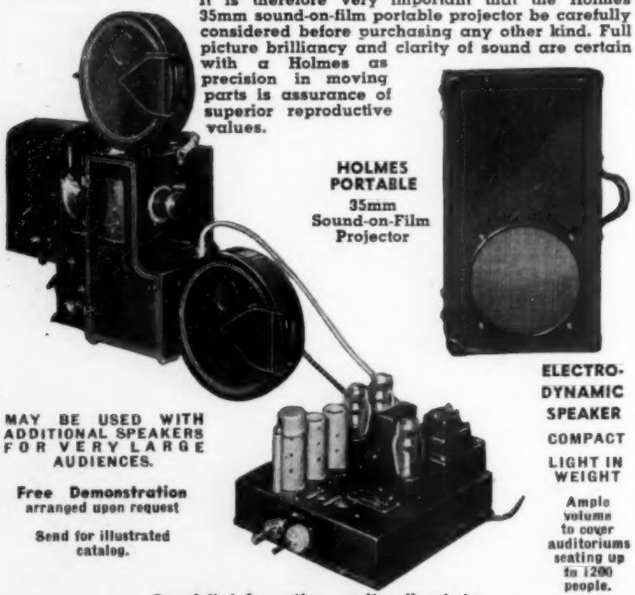

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wealth of not only one, but many libraries. It may be expected therefore that many who heretofore have been prevented from undertaking research for want of proper library facilities, will now find it possible to devote themselves to some of the numberless undeveloped fields. Many scholars are using microfilm as a short cut and substitute for extensive copying and note-taking in the gathering of material. The inconveniences arising from errors or incompleteness in such records are entirely avoided. With microfilm copy at hand it is never necessary to make a second trip to a library or borrow the material a second time to verify references or notes.

For centuries no doubt, scholars and scientists have dreamed of the ideal book in which all demanded references would be collected—a book available at reasonable cost for personal use in the study or laboratory. At last this ideal has been achieved. The book is not a rarity, nor is it costly. It is small enough to be carried in one's pocket. It is on microfilm.

Microfilms may be obtained from the following libraries: Brown University, Catholic University, Washington, D. C., Chicago University; Columbia University; Grosvenor Library, Buffalo, New York; Harvard University; Henry Huntington Library, San Marino, California; University of Illinois; Iowa State College; Iowa State University; University of Kansas; Library of Congress; McGill University; University of Michigan; University of Minnesota; The National Archives; New York Public Library; University of North Carolina; Princeton University; University of Rochester; Stanford University; University of Toronto; University of Virginia; University of Washington, St. Louis; University of Washington, Seattle; University of Wisconsin; Yale University.

Re-edited U.S.D.A. Short Subjects

The American Film Center has re-edited seven short subjects in cooperation with the United States Department of Agriculture Division of Motion Pictures. These subjects, running from five to nine minutes each, have been prepared from existing footage and films in the Agricultural film library.

Subjects include "How Animal Life Begins" (9 min.); "Prize Calf" (5 min.); "Cicada" (8 min); "Cane Sugar" (5 min.); "Swimming I, II, and III" (5 min. each reel); "Clouds and Weather" (6 min.); "Farm and City" (9 min.).

Each film has with it a study guide which gives a brief synopsis of the film, background of the subject treated, suggestions for class activities, bibliographical notes, and the evaluation of the film by the American Council on Education. The films are being handled on a sale basis directly from the American Film Center, with purchase figure at from $6.75 to $10.00 per reel.

One familiar with modern education materials and methods can readily see how the motion picture described above makes the job of interpreting the school to the public much easier. If the school had attempted to present this subject to the public through some medium other than the motion picture it is doubtful whether the public would have received as clear a conception of the newer materials and methods of reading.

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Administration of Visual Aids

Implications of Increase in Audio-Visual Equipment—H. Arnold Perry, Division of Instructional Service, State Department of Public Instruction, Raleigh—*North Carolina Education*, December, 1939

During 1937-8 when over a hundred institutes for teachers were held by the State Department of Public Instruction at various centers throughout the state, persons in attendance seemed as much interested in the audio-visual equipment used as they were in the particular topics presented. In March, 1939 an Audio-Visual Department was established in the North Carolina Education Association. In the annual reports of principals to the State Departments at the close of last year, many statements were included regarding developments in the audio-visual field. Equipment inventories included, for the first time, audio-visual equipment and a tabulation of these figures reveals a remarkable increase over the figures for North Carolina in the national survey made by the Office of Education and the American Council on Education.

During the three-year period 1936-39, there was an increase from 39 to 202 motion picture projectors, a gain of 418%. Film strip projectors increased from 23 to 102, or 343%. Radios increased 169%, and phonographs 166%. Lantern slide projectors doubled, from 62 to 124.

Among the factors which no doubt contributed to this increase in interest and in materials were: general improvement in economic conditions, especially in school financing; an improvement in the quality of projection equipment; decrease in cost of equipment; growing awareness on the part of educators for visual aids; availability of better audio-visual aids in terms of suitability for various grade levels as well as in technical quality; the establishment of a rental service at the University of North Carolina.

The most important consideration before school people who have already acquired these new aids is the effective use of them. Administrators should plan these programs for a long term, and they should make a study of successful practice in other school systems. Distribution arrangements within the school system should be routinized, so that there will be a minimum of effort and a maximum of use. Adequate inventory should be made of available equipment already in the schools. Provision should be made for additional materials and replacements. Inservice teacher-training in the techniques of using audio-visual aids is also necessary. And, what is most important, a means of integrating it with the curriculum to broaden and enrich the educational experience.

Administering a Film Library—Janet M. McDonald, Texas Technological College — *Texas Outlook*, 24:49-50 January, 1940

Problems met with in administering the local film library: 1. Selection, based on evaluations by teacher committees, check lists of other film libraries. Free films should be carefully evaluated before being placed in an educational film library. 2. Publicity: This may be done through the catalog, through invitations for cooperation in previewing and selection, and through cooperative experimentation. 3. Booking involves careful planning for borrowers who have made plans long in advance, as well as for those who desire material at short notice. Care should be taken to send films out in good condition and a day before the showing date. 4. Accounting, to determine costs of maintenance, income and balance is very essential. This involves also records of the number of times each film was used, the number of viewers, etc.

Selecting Geography Equipment—Frank E. Sorenson, Teachers College High School, University of Nebraska—*Nebraska Educational Journal*, 19:333 December 1939

An inventory of geography materials and equipment in the classrooms of all schools should be made to determine whether or not adequate instruction can be carried on.

1. Who should select the geography equipment? The superintendent, a geography specialist affiliated with the local Teachers College or University, and the teachers.
2. What equipment should be considered essential? Modern textbooks and workbooks; 12" or 16" globe showing political boundary lines and physical factors, as well as ocean currents. Wall maps, including a relief map, a rainfall map, a temperature map, and a native vegetation map. A slated map can also be added in the upper grades. Also a map of the home state. An authentic atlas, such as the J. Paul Goode. Atlas of the Rand McNally Co. Other visual aids, including slides, films, or mere prints.

Laboratory materials include a thermometer, a barometer and a rain gauge; a sand table in the lower grades; a display cabinet for rocks and minerals, labels, a bulletin board.

This represents more equipment than a school should try to buy in a single year. Perhaps a five-year plan can be arranged. Good equipment is simply an aid to good teaching and cannot take the place of it.

Research and Evaluation

Evaluating a Safety Film—Charles F. Hoban, Jr.—*Safety Education* 19:202 January, 1940

Evaluation of a film may be done in one of three ways:

a) A teacher or a group of teachers may preview and predict the value; b) The film may be used in class and its value rated on student reaction; c) A controlled observation may be set up to determine student behavior before and after the use of the film to note the values accruing from the film.

Basically in evaluating motion pictures in safety education the evaluator must consider the contribution—predictable and demonstrable—of the film and safe conduct. If the film contributes to some phase of conduct which relates to the safety of the individual or his brethren, it is a good film to the degree of its contribution to conduct. The first criterion, then, is the purpose for which the film is used. The second is the maturity and background of the pupils.

The third criterion is the setting in which the film is placed—that is, the experiences which preceded its showing and those which will follow. The fourth criterion is the contribution the film makes to safe conduct.

Relative Importance of Placement of Motion Pictures in Classroom Instruction—Elizabeth L. Stadtlander, Slippery Rock State Teachers College, Penn.—*Elementary School Journal*, 40:284-90. December, 1939

In an attempt to determine the most advantageous time to present a film when used as a teaching device in connection with reading, a series of film presentations was devised for the sixth grade of the Laboratory School. Over a period of two years (1937-9) the experiment involved the use of 75 children. Tests were given the first year and again the second year to verify the results. The content of the material was based on nature study and reading. Reading material included mimeographed stories and supplementary readers.

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(*Concluded on page 72*)

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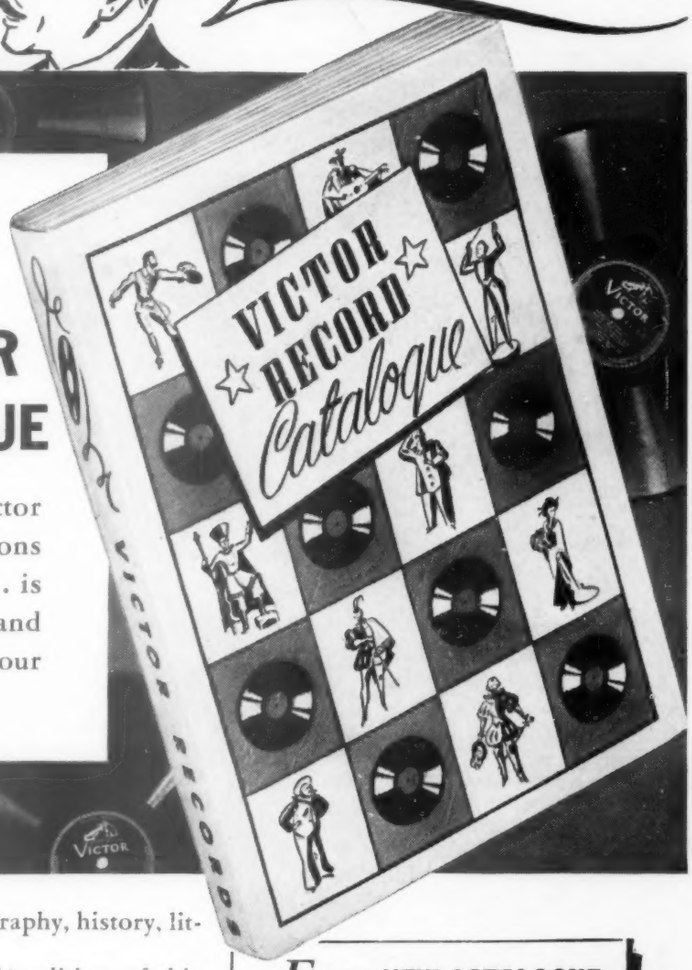

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children an understanding of the usefulness and value of each creature. Units of work included the families of monkeys and apes, bears, game birds and the ruffed grouse.

Every period was subdivided into four parts: discussion, reading, film test. The sequence was rotated for each unit. The results of showing the film at different times within the period was measured by means of objective tests of the true-false type. Each of the rotation procedures was used twice: first, to obtain results; second, to verify the results obtained. In the majority of cases there was little change in scores obtained on the tests.

The conclusions reached from this study are: 1) that the showing of the film after the material had been read is superior to the utilization of it for motivating purposes; and 2) the use of the film after reading clarifies the printed matter better than the printed matter elucidates the film. These conclusions are valid only for one type of material and for one age level.

Photoplay Appreciation

What Shall We Do About Hatred.—by Alice V. Keliher—*Progressive Education*, 16:485-7 November, 1939

In order to help young people to guard against the furious outbursts of hidden feeling and the hot-headed moves which result from restraints imposed on us by our mores, we as teachers can first understand the process in ourselves, and secondly we can help our young people to understand it. High school students are well able to understand the role of emotions in behavior. For example, these were some of the comments of high school students after seeing the excerpt of the motion picture "Fury,": "The tension, the awful waiting feeling, the growing excitement put everything out of the people's minds except the lust for revenge against someone, anyone." "It's just like going to war. Nobody is really against the enemy. But they will look for the slightest excuse to take out their anger on someone else."

Such open study, through films, of the manipulation of human emotions should be widely encouraged since awareness of what is happening within us gives us some measure of control over what we do. Rather than being victims of our feelings, we can more and more direct them to useful channels.

Group Discussion Guide — a monthly cumulative presentation of individual photoplay studies, replacing the individual guides previously issued. Recreational and Educational Guides, Inc. Room 1418, 1501 Broadway, New York, N. Y. $2.00 yearly. William Lewin, editor.

This enlarged edition of the photoplay study guides which have previously been a great help to students and teachers furnishes excellent illustrations, study helps and background information in the form of production notes. Guides to *The Hunchback of Notre Dame, Gulliver's Travels, The Great Victor Herbert,* and *Harvest* are included in the January, 1940 issue.

Periodicals

Films—A quarterly of discussion and analysis. Vol. 1, No. 1. Kamin Publishers, 15 West 56th St., N.Y.C. $2.00 year, 60c issue. November, 1939

The appearance on the news stands of a new magazine *Films* gives promise of filling the gap in film literature created by the dissolution of *Experimental Cinema* and *New Theatre (and Film)*. By the very simplicity of its format—almost severity—*Films* reveals the seriousness of its purpose. In its first issue, it has brought together some fine statements by leaders in the creative cinema movement. Professor Sawyer Falk of Syracuse University, opens the discussion on a metaphysical note, by which he indicates that there is a decency and humanitarianism in art, and especially in the cinema art, which transcends any reformist campaign now in existence. He offers three ethical principles or "counter-rules against censorship," by which film makers might be guided if they are to meet the requirements of American morality.

That the motion picture movement lost a guiding spirit in the premature death in 1933 of Harry Alan Potamkin is revealed by the manuscript printed in this issue of *Films*. Dr. Edgar Dale, in a series of annotations, points out the basic soundness of Potamkin's observations almost ten years ago, about the relationship of films to society, and of both to the impressionable minds of the young. The serious movie-goers who want some guidance in appreciating the creative technique in films, will find much of value in Cavalcanti's discussion on the use of sound (commentary, music, dialogue, and natural sounds) in movies.

This periodical is especially recommended to teachers of photoplay appreciation and to teachers interested in the social force of the movies.

Motion Picture Number — *Design*, 41: 7-32 December, 1939

This issue, as stated in the foreword by Felix Payant, is devoted entirely to the motion picture as a force in art education and an art whose implications are many and varied.

Daniel M. Mendelowitz, Assistant Professor of Art Education at Stanford University, in his article "Motion Pictures and Art Education," sees the motion picture as having "potentialities of being one of the most important educational and cultural agencies of our time. This powerful artistic medium has certain mechanical features which make it particularly effective as an instrument for mass education."

Film production technique is discussed in a number of articles, namely, "ABC's of Movie Making," by Benjamin F. Farber, Jr., "Motion Pictures Come from a Design," by Evelyn S. Brown of the Harmon Foundation, "Scholastic Hollywoods," a description of movie-making activities at Central High School, Newark, New Jersey, by Alexander B. Lewis, and "A Modernized Cinderella," another student-made film, by Ruth Henry of San Diego.

Reviews and news of artistic films, many striking illustrations, and a listing of educational films available for art education, complete this splendid number.

Source Materials

List of Free Films and Recommended Literature—compiled by Marian M. Wiersch, Nels Nelson and M. I. Smith. Visual Education Section, Northeast Division, Minnesota Education Association, October, 1939. 30 pp. mimeo. Available from M. I. Smith, High School, Hibbing, Minn. for 10 cents.

A list of approximately one hundred free films recommended by the three members of the Visual Education Conference Literature Committee who have compiled the list, representing the schools of Duluth, Hibbing and Virginia, Minn. The films are arranged according to the Dewey Decimal Library classification, with screening time, silent or sound, date produced, distributor, a brief description of the film content, and recommended grade placement.

A List of Films on Skiing—Lawrence E. Briggs, Secretary, Western Mass. Winter Sports Council.—*Journal of Health and Physical Education*. 11:36 January, 1940

Films are listed according to distributors, with fairly complete information as to size, length and price. No attempt at annotation or evaluation.

Sources of Free and Inexpensive Aids—Francis Feeney, Creighton School, Phoenix, Ariz.—*The Arizona Teacher*, 28:144 January, 1940

An evaluated list of bibliographies which have appeared recently, dealing with materials from commercial sources. Subsequent listings by the same author will indicate government and professional sources that is, if interest in the field warrants.

Visual Education—Paul Anderson, Dillon, Montana. *Montana Education*, 16:9 December, 1939

This is the first issue in which a page on visual education has been allocated. This was in response to a request from the Social Studies Sectional meeting of the Montana Education Association. An attempt will be made in this monthly section to exchange experiences in visual education, to evaluate film use, and to list news notes.

A short article by Robert Hamilton of Bozeman summarizes the proceedings at the Midwestern Forum held in Chicago last May. (Proceedings available from *Educational Screen*.)

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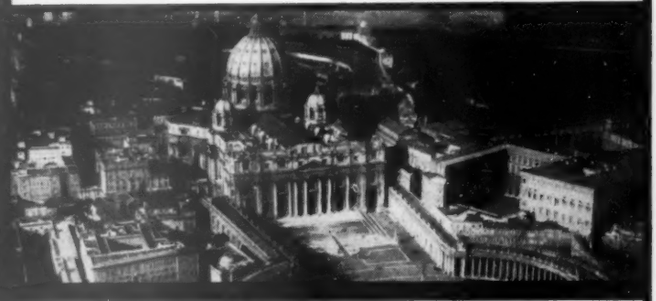

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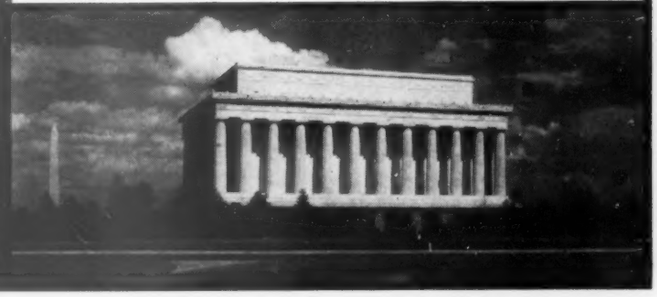

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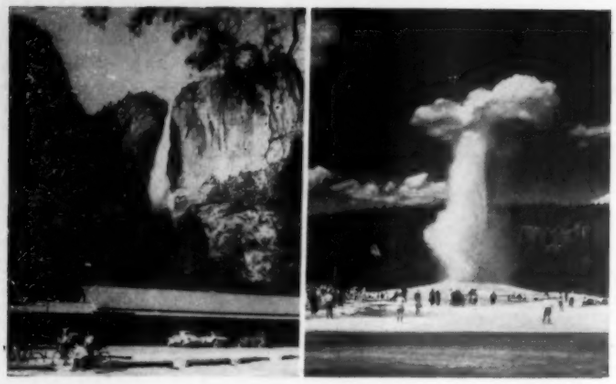

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Perceptual Learning

(*Concluded from page* 50)

Some guiding principles might be briefly stated as follows:

1. No one type of material should be used to the exclusion of others.
2. Too much material used at any one time may befog rather than clarify learning.
3. Preparation for effective use of aids to perceptual learning is essential. Immediate "mental set" may cause an intellectually active attitude and prevent passive indifference.
4. Materials should be an integral part of learning areas and should be definitely a part of well-organized teaching procedure. Requisitions for materials should contain evidence of the application of this principle.

Will not some other readers of EDUCATIONAL SCREEN elaborate upon the ideas here presented? May there be abundant criticism of this brief presentation! May we call particular attention to the term "perceptual learning" used instead of "visual instruction," "audio-visual instruction," "sensory aids" and similiar terms? Pro and con discussion should be enlightening.

Everyone interested in education should examine himself to see if he is doing the best possible job. Are the schools of this country as good as they can be with our present knowledge of educational procedures and materials available to make educational procedures effective?

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Three Methods of Using Motion Pictures

(*Continued from page* 57)

accorded to all, and the pre-tests were given twenty-four hours before the film presentation and the final test immediately after the film presentation in each case.

The reliability coefficients of the six tests when given as pretests were as follows: *Plant Growth* .864, *Plant Roots* .899, *Leaves* .771, *Flowers at Work* .705, *Green Plant* .905, *Flower to Fruit* .856 as determined by split test correlation and corrected by the Spearman-Brown formula. The reliability coefficients of the same tests when given as final tests, were *Plant Growth* .893, *Plant Roots* .903, *Leaves* .830, *Flowers at Work* .826, *Green Plant* .901, *Flower to Fruit* .849.

No attempt was made to determine the statistical validity of the tests but care was taken to see that they covered every item of importance in each film. An experienced teacher of botany checked each test with its respective film and also checked the authenticity of all the statements.

4. *Teaching Procedure—Part I*

The lessons on the four first films: *Plant Growth, Plant Roots, Leaves,* and *Flowers at Work* were pre-

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sented by the regular classroom teachers in the classrooms regularly used. In all of these film presentations with Group A and with the second film presentation in each lesson with Group B the teachers used questions and outlines based on the film content. These had been prepared previously by the teachers themselves with the help of the writer. For all of the Groups: A, B, and C a list of questions on each film was prepared in advance by the writer for use in guiding the discussion during the period between the two film showings of each lesson.

An outline of the procedure used in presenting the four talking pictures to the three pupil groups is given below:

Group A

1. Pre-test—twelve minutes.
2. Orientation statement—two minutes.
3. Presentation of film as a silent film accompanied with questions and discussion prepared and directed by the teacher—eleven minutes.
4. Questions and discussion on film content — ten minutes.
5. Presentation of film as a silent film the second time with additional questions and discussions led by the teacher, stressing points not previously understood—eleven minutes.
6. Final test—twelve minutes.

Group B

1. Pre-test—twelve minutes.
2. Orientation statement—two minutes.
3. Presentation of film as a talking picture—eleven minutes.
4. Questions and discussion of film content (Same as for Group A)—ten minutes.
5. Presentation of film the second time but with sound from the projector shut off and accompanied instead by questions and discussion—the same as with the second presentation to Group A—eleven minutes.
6. Final test—twelve minutes.

Group C

1. Pre-test—twelve minutes.
2. Orientation statement—two minutes.
3. Presentation of the film as a talking picture—eleven minutes.
4. Questions and discussion on film content (Same as for Groups A and B)—ten minutes.
5. Presentation of the film the second time as a talking or sound picture—eleven minutes.

(*Continued on page 76*)

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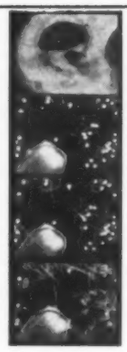
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6. Final test—twelve minutes.

From the above outline of procedure it will be noted that the three groups were taught with the same motion pictures and that the only difference in the presentation of the pictorial materials was in the oral explanatory accompaniment and class discussion during the actual showing of the films. Hence any difference in results reasonably could be assumed to be due to the difference in the effectiveness of the three methods.

5. *Teaching Procedure—Part II*

In order to measure any differences in the effectiveness of the above mentioned methods in promoting the transfer of training all the pupils in the three groups were exposed subsequently to two silent films: *The Green Plant* and *From Flower to Fruit.* As previously stated these films cover the same biological processes as the talking pictures but employ different kinds of plants. They contain the customary captions and other devices of silent films and are part of the Eastman Teaching Films series. They were presented to all of the groups at the same time in the high school auditorium withont any instruction from the teachers other than a brief orientation statement before the showing.

Since all three groups had these two films presented in the same manner any difference in gains between the three groups in this second part of the study might be assumed to be due to the difference in the three methods of presenting the first four films. The procedure with each of these two films was as follows:

1. Pre-test—twelve minutes.
2. Orientation statement including the reason for studying the film—two minutes.
3. Presentation of film without any discussion——fifteen minutes.
4. Final test—twelve minutes.

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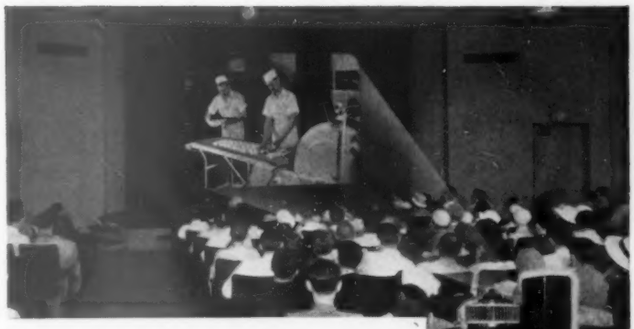
(Chapters IV and V, giving results and conclusions, will appear in our March issue, completing the thesis.)

Safety Education

(*Concluded from page 63*)

streets filled with young cyclists. Since they use the streets and go where cars go, these young "drivers" should be subjected to the same regulations as an auto operator. Perhaps at first the child is reluctant to observe these rules, but if he is told how accidents occur by going through a stop light or an intersection without stopping, he will readily see the necessity of obeying the rules. There is such a glow of satisfaction in a youngster when he pulls up to a red light alongside an auto and stops, then goes on when the light changes, that children soon enjoy following the same rules older persons obey. Not only is there the satisfaction in emulating an auto operator, but basically, the youngster is practicing safety first.

Through introspective data and personal investigation of the individual, the teacher can find the child's attitude towards this vital subject. If he has the proper mental set, his reaction should show an interest and a desire to learn more of the importance of safety. This writer believes that if children make, see, and discuss the individual safety slides, they will gain mental pictures, images, and lasting impressions of certain safety practices which are fundamentally vital in their daily lives and activities.



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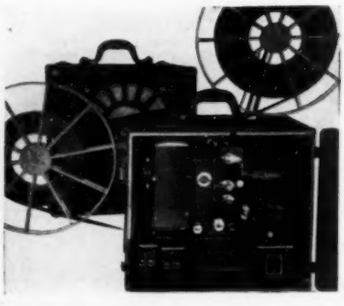

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American Library Association Holds Visual Instruction Conferences

The Midwest Conference of the American Library Association, held December 27-30 in Chicago devoted two days and two evenings to the consideration of motion pictures and other "non-reading" materials. One session was held jointly by the School Libraries and the Teacher-Training Libraries sections of the Association of College and Reference Libraries. It was marked by an address and equipment demonstrations by Dr. M. Lanning Shane, of Peabody College for Teachers, Nashville, the program including a round table discussion on "A Library Centered Audio-Visual Program.

The remainder of the work was conducted jointly by the Publicity Committee and the Visual Methods Committee of the A.L.A. Guest speaker here was Mr. John Devine, Assistant Director of the American Films Center. In each case the audience numbered several hundred, and seemed most receptive to the new types of material, offered for the first time at this A.L.A. conference.

According to Mrs. Beatrice Sawyer Rossell, head of A.L.A. publicity activities, the present active interest in motion pictures was inspired, to a considerable extent, by the reception accorded in both library and school circles to the two-reel silent film *Found In A Book*, produced by the Library School of the University of Illinois, and distributed for the A.L.A. by Bell & Howell. Two of this year's films were on the same field, with healthy emphasis on results of effective library utilization, rather than on internal library methodics. Several of the films were of the institutional type, made to bring home to the local community the good work done by the local library, despite physical handicaps that should be removed. In one case a pointed comparison was made with the better building and equipment facilities enjoyed by the library in the adjoining town. A very effective original 16mm. sound film, made on the "documentary" pattern, showed the activities of the Sarah Lawrence School for Girls in terms of human aims and achievements, rather than in the stereotyped campus-classroom-dormitory type of building review that characterizes so many institutional films made by schools. Two of the seven films shown were professionally produced, the remainder made by amateur producers. In technical standard, they show encouraging progress.

Considerable discussion concerned itself with the possible future functions of present-day libraries as film distribution centers. The routines worked out for the handling of printed matter are readily applicable to film, it was pointed out. The general interest and the forward-looking attitude of the entire meeting promises real contributions to the advancement of visual instruction.

(Contributed by William F. Kruse)

Notes

Northwestern University Film Programs

A new educational technique, combining the use of documentary films and the Town Hall type of discussion, will be experimentally inaugurated at Northwestern University during the second semester. Six programs will be presented by the University college in Thorne hall on the Chicago campus, Dean Samuel Stevens has announced. They will be concerned with vital contemporary American problems, illustrated by films and utilizing as discussion leaders Dr. Irving J. Lee, of the speech division of the University college, and visiting experts. The programs will be open free to students enrolled in the college, and open on payment of a small fee to the general public. Topics to be discussed are Democracy and Education, February 21; Propaganda, March 13; War and Peace, March 27, Unemployment, April 10; The People's Wealth, April 24, and Free Speech, May 8.

Films to be used in the series come from a great variety of sources. Documentary productions from the National Association of Manufacturers and the Tashkent Textile cooperative of Soviet Russia, from the United States navy and from peace societies, from Gaumont-British's new documentary studio and from the March of Time, will be shown. In addition one program will consist of cut scenes from Hollywood films.

Texas Visual Education Facts

We are indebted to Mr. C. F. Reagan of the Texas Visual Education Company, Austin, for the following interesting news items.

Over 700 superintendents, principals, supervisors and teachers were enrolled in Texas summer schools in the summer of 1939 for Visual Education courses. Audio-Visual Education Conferences were held during the same summer at Abiline Christian College, Sam Houston State Teachers College, and Texas Technological College.

A Film Library Service is now available for Texas schools from Texas Technological College, Lubbock; University of San Antonio, San Antonio; University of Texas, Austin; West Texas Teachers College, Canyon; and Sam Houston State T. C., Huntsville. About 25 school systems in East Texas have organized the East Texas Bureau of Visual Education located at Kilgore Junior College, with a library of over 140 reels.

"Ten Best" Theatrical Films for Year

"Goodbye, Mr. Chips," made by MGM in England, was selected the best picture of 1939 by reviewers participating in the annual *Film Daily* poll, receiving 472 of the 542 votes cast. Other selections were, in order: "Mr. Smith Goes to Washington," Columbia; "Pygmalion," made in England by MGM; "Wuthering Heights," a Samuel Goldwyn production for United Artists; "Dark Victory," Warner; "The Women," MGM; "The Wizard of Oz," MGM; "Juarez," Warner; "Stanley and Livingstone," Twentieth-Century Fox; "The Old Maid," Warner.

Question: Are there enough Instructional Sound Films available to warrant starting an audio-visual program in my school?

Answer: Erpi Classroom Films has produced approximately one hundred fifty Sound Films specifically for classroom use and is continuing to produce at the rate of twenty-four subjects per year.

In sharp contrast to the situation of only a few years ago, Erpi Classroom Films Inc. now offers to your school a comprehensive library of sound films. Produced under the sponsorship of leading educators—made solely for classroom use—these films incorporate the finest modern photography and the most modern teaching technique.

Subjects covered include the Biological Sciences, the Physical Sciences, Human Geography, Music, Art, Athletics, Child Psychology, Vocational Guidance—for use from primary grades through high school.

Send the coupon today for full details on these modern aids to more effective teaching!

See our exhibit at the NEA Convention, St. Louis, Booths L29-30, K32-34

Erpi Classroom Films Inc.

ERPI CLASSROOM FILMS INC. ES-2-40
35-11 Thirty-fifth Avenue, Long Island City, N. Y.

Gentlemen: Please send me your complete descriptive catalog and your special Integration Chart which shows graphically how each film can be used in a number of different courses.

*Name*_____

*Address*_____

*City*_____ *State*_____

Current Film News

ERPI CLASSROOM FILMS INC., 35-11 35th Avenue, Long Island City, New York, announce the availability of many new educational sound films to schools and colleges throughout the country. These films round out a broad production program carried on during 1939 and cover a wide range of subjects. Among them are the following:

Goats — Follows two baby goats through their early development periods and shows the feeding, milking and care of mature goats.

Shep, the Farm Dog—Beautiful outdoor scenes form the settings as Shep goes through a busy day of herding cattle and routing chickens from the garden. Portrays wholesome boy-dog relationship.

Black Bear Twins—Provides an unusual insight into the surroundings and characteristics of these popular animals.

Children of Holland — Authentic recording of child life in that quaint country.

The Fireman—Presents the activities of a company of firemen in a modern city. Care of equipment, drills, life saving devices are stressed.

The Pygmies of Africa—Filmed in cooperation with governmental and tribal authorities.

The Watussi of Africa—Portrays a highly developed African culture which few people have had an opportunity to study.

Mexican Children—A vivid picture of the home, school and social environment of our interesting neighbors.

Colonial Children—A picturesque visualization of colonial home life in all its aspects.

PICTORIAL FILMS, Inc, 1650 Broadway, New York, offer for sale or rental:

Industrious Finland—1 reel, 16mm sound—Photographed just previously to the outbreak of Russian-Finnish hostilities, the film does not portray a people under stress of this conflict, but the sinews of that nation which now play a major part in this struggle for existence. Finland's progressive agriculture is shown—her inexhaustible timber — her nickel mining at Petsamo—her artistic pottery and china—her beautiful cities, Helsinki and Viborg——her ancient history—her culture, her people. An off-stage commentator and a musical score by the great Finnish composer Jan Sibelius accompany the film.

BAILEY FILM SERVICE, 1651 Cosmo Street, Hollywood, California, have completed five new nature study films in sound, and seven silent color pictures among their "Educational Films of Merit." These nature-study films, termed *Trailside Adventures* by their exclusive distributors, were produced by Arthur C. Barr, well-known naturalist. Titles are:

Cooper Hawk, Horned Owl, Roadrunner, Sparrow Hawk, The Kangaroo Rat and His Associates—biographical studies of the entire life cycles of these birds and, in the last mentioned film, of smaller animals. These subjects make an important edition to the various science courses.

Color is also playing an important part in the Bailey spring releases, as indicated by the production of the following color films on the United States Natural Parks and three others:

Yellowstone, Mt. Rainier, Glacier, Yosemite (offered individually or as a kit), **China, Missions of California, Desert Wild Flowers**—each 200 feet and retail for only slightly more than black-and-white film. They are also available for rent from Bailey Film Service and libraries in different sections of the country, names of which will be sent on request.

GARRISON FILM DISTRIBUTORS INC., 1600 Broadway, New York City, have obtained for distribution the first sound motion picture of a Nobel Prize Winner doing the experiments for which he was awarded the Nobel Prize, namely:

Dr. Langmuir — 16mm and 35mm sound—Showing Dr. Irving Langmuir of the General Electric Company and his researches in surface chemistry which resulted in his becoming the first industrial chemist in this nation to receive the Nobel Prize in chemistry in 1932. This film was produced and directed by Edmund Lawrence Dorfman, President of the American Institute of Motion Pictures, for the New York World's Fair Science and Education Committee, headed by Dr. Gerald Wendt, and is the first of a projected series which it is hoped will bring to the screen four other great American scientists who have been awarded the Nobel Prize—Dr. Urey of Columbia University, Dr. Davisson of the Bell Telephone Laboratories, Dr. Compton of the University of Chicago, and Dr. Millikan of California Technology. The Langmuir film is available for rental or purchase.

POST PICTURES, 723 Seventh Ave., New York City, report that:

King of the Sierras—16mm sound—has been highly recommended for children by the Legion of Decency and the National Board of Review. This is one of many films on which Post Pictures has 16mm exclusive distribution rights.

Washington, the Most Beautiful City in the World—2 reels—is another recent addition to this library.

WALTER O. GUTLOHN, INC., 35 W. 45th Street, New York City, offer many new releases this month, including twelve Monogram feature films in 16mm sound:

Boys' Reformatory—6 reels—A portrayal of a youth who finds himself fighting crime from the inside of a reform school; starring Frankie Darro.

Undercover Agent—6 reels—A story of the U. S. Postal inspectors' fight against crime; featuring Russell Gleason and Shirley Deane.

Wolf Call—7 reels — Jack London's story of the Northland featuring John Carroll and Movita.

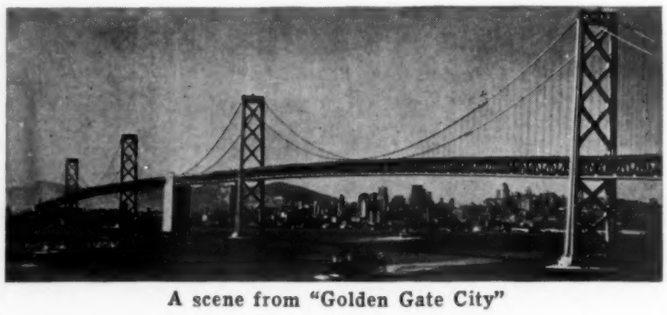
Stunt Pilot—7 reels—Airplane film based on the Tailspin Tommy cartoon strip with John Trent and Marjorie Reynolds.

Tex Ritter Musical Westerns: "Rollin' Westward," "Man from Texas," "Down the Wyoming Trail" and five others complete the Monogram list.

Camera Highlights of 1939—1 reel, 16mm sound—A review of the great

---

CASTLE FILMS, Rockefeller Center, New York City, have issued their new 1940 film catalog for 16mm (silent and sound) and 8mm projectors. The films, as shown by the index, are grouped according to general subject classifications: sports, news, travel, cartoons, novelties, etc. Each release is described as to contents and illustrated with one or more pictures. Among the new subjects are:



A scene from "Golden Gate City"

Sports Parade of the Year 1939 — Annual review of outstanding sports events during the year, showing champions winning their titles.

Football Thrills of 1939—A panorama of the season's greatest thrills, showing headline plays of top-notch games.

Ski Revels—Skiing at its best amid scenes of amazing beauty.

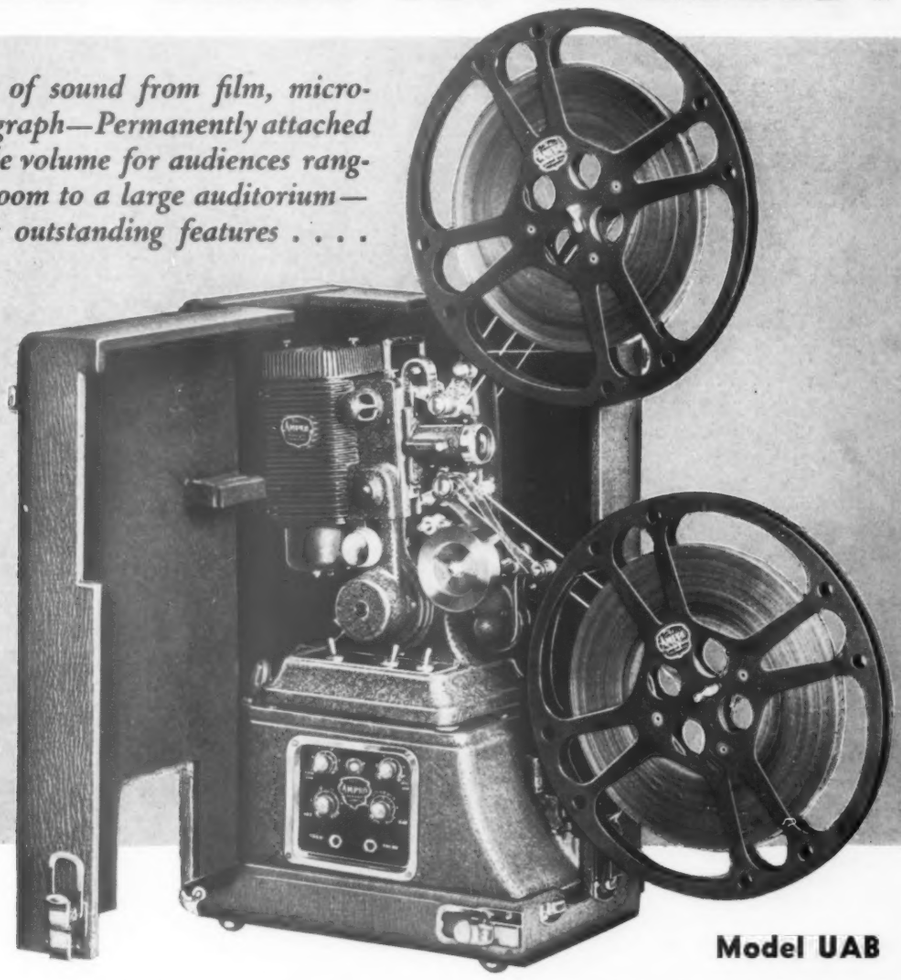
Sock—Demonstrating the art of self-defense by tomorrow's champions.

Swimming and Diving Aces — Slow motion studies of great divers.

Golden Gate City—A tour through San Francisco, showing its new bridges, Dolores Mission, Chinatown, Fisherman's Wharf, etc.

New Sound Projector Offers *PLUS* Value For Schools!

Complete mixing of sound from film, microphone and phonograph—Permanently attached reel arms—Ample volume for audiences ranging from a classroom to a large auditorium—And many other outstanding features . . . .



Model UAB

Why this improved Ampro Projector is ideal for Schools . . .

This new Ampro 16 mm. Sound Projector Model UAB offers remarkable adaptability to the varying demands of school Audio-Visual programs. At unusually low price levels you can obtain all the standard Ampro features plus basic new improvements that make this model an outstanding value. These features include: Sound-proofed blimp case . . . double action tone control . . . projector volume control and microphone volume control which permits complete mixing of sound from film, microphone and phonograph . . . master volume control which permits reduction of extraneous noises in low position and gives reserve amplification in high positions . . . attached folding reel arms . . . sound and silent speeds . . . rheostat control . . . reverse picture operation . . . still pictures . . . new amplifier conforming with new R.M.A. tube ratings which operate the tubes with a larger factor of safety . . . 6L6 Beam Power tubes with three triode driver tubes insure high output and low distortion without overloading . . . all tubes easily accessible . . . forced draft ventilation on amplifier . . . A.C.-D.C. motor . . . 50-60 cycle amplifier (operates on D.C. with 150-watt convertor) . . . 2-inch F 1.6 super lens (all sizes interchangeable) . . . 750-watt illumination . . . automatic rewind . . . pilot and dial lamps . . . lens lock . . . up and down tilt . . . framer . . . centralized oil well . . . 12-inch deluxe speaker.

Model UAB—Complete with sound-proofed blimp case . . . $365

Model UA—Same as model UAB but without blimp case. $345

Send coupon for full detailed information.

AMPRO

PRECISION CINE EQUIPMENT

Ampro Corp., 2839 N. Western Ave., Chicago, Ill.

Ampro Corporation (ES 240)
2839 N. Western Avenue, Chicago, Ill.

Gentlemen: Please send me your latest catalog giving full information on the new Ampro model UAB and the complete line of Ampro 16 mm. silent and sound projectors.

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"POETIC GEMS"
Pictorial Adaptations of the Immortal Poems of
EDGAR A. GUEST
A Series of 13 Single-Reel Subjects on 16mm. Sound Film

"The FIGHT for PEACE"
Documentary Historical Spectacle.
7-Reel Feature—16mm. S. O. F.

"PORTS O'CALL"
Exceptionally intimate and all embracing World Travelogues.
A Series of 31 Single-Reel 16mm. Subjects—Sound or Silent

"KING of the SIERRAS"
An Epic Dramatization of an Old Ranger's Humane Philosophy. A Revelation of Equine Wild Life.
6-Reel Feature—16mm. S. O. F.

"WILD INNOCENCE"
Australian Nature Drama — Absorbing Tale of Kangaroos.
6-Reel Feature—16mm. S. O. F.

Other Subjects in Wide Variety — Catalog on Request

POST PICTURES CORP. 723 Seventh Ave. New York City

HISTORY REPEATS ITSELF

In the educational sound films, TERRITORIAL EXPANSION and TERRITORIAL POSSESSIONS, the romance of our exciting history is retold.

TERRITORIAL EXPANSION OF THE UNITED STATES covers the growth of our country from the Revolutionary War through the Gadsden Purchase.

TERRITORIAL POSSESSIONS OF THE UNITED STATES carries our history onward, beginning with Seward's Folly and finishing with the purchase of the Virgin Islands.

Not only were these films made to instruct, but also to create an interest in American history. An interest so magnetic that the student's desire to learn would bring knowledge of the greatness of this country and, appreciation of the freedom that is ours.

INTERNATIONAL GEOGRAPHIC PICTURES
52 VANDERBILT AVENUE NEW YORK, NEW YORK

events of the past year, including the visit of British royalty, Coronation of Pope Pius XII, bombing of Helsinki and the Graf Spee incident.

Rice Culture—2 reels, 16mm silent.

BELL & HOWELL COMPANY, 1801 Larchmont Avenue, Chicago, are now distributing the 1940 edition of the Filmosound Library Catalog just off the press. The new 92-page film book is larger than last year's catalog, listing 400 more films on a vast variety of subjects: Hollywood features, nature subjects, comedies, newsreels, films on history, travel, industry, religion, adventure, music, sport, teacher training. Descriptions and rental prices are given, and the audience-suitability of each picture indicated. A new feature is the addition of ratings on those films which have been evaluated by official teaching bodies. The catalog is of standard letter size and is "binder punched." Bell & Howell will be glad to send a copy of the book without charge to all owners of 16mm sound projectors, upon registration in the Bell & Howell files.

DeVry School Films

The circuit service of 16mm educational sound pictures distributed by DeVry School Films, a subsidiary of the DeVry Corporation, 1111 Armitage Avenue, Chicago, while not new in principle, is a new development with sound educational films. The plan makes it possible for (1) a group of schools to rent or purchase a 16mm sound projector and a complete program of educational films, or (2) if schools own projectors, to work out a cooperative Visual Education program with motion pictures, without the necessity of being obliged to take a "block" or a "schedule" of subjects, the dates and subjects of which are selected by the distributor. By permitting the member schools to select the films they want at the time they want them, the DeVry plan eliminates the severest objection to this type of service.

Circuit Plan No. 1 requires a group of schools to contract to rent a 16mm sound projector and a minimum of 40 educational films over a period of one school year. Circuit Plan No. 2 is a plan whereby two or more schools may contract to buy a projector and rent any number of educational films (minimum of 20) during the school year.

Another feature is the complete study outlines furnished with each subject. These outlines are sent out before the films, thus enabling the teachers to prepare their pupils for the film lesson. The outlines give in detail the content of the film lesson with detailed instruction as to how to present the lesson so that maximum teaching results may follow.

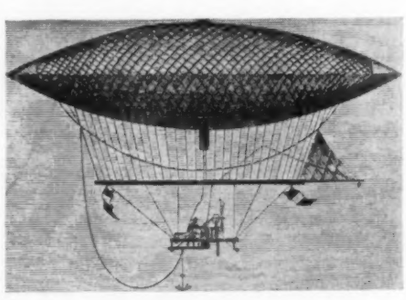
Each subject in the DeVry School Film Library is selected for its teaching value, and new subjects are added monthly. DeVry School Films produces one or more new subjects each month besides purchasing new subjects from other producers. A catalogue descriptive of the service and listing the films available may be had upon request.

Film Reviews

The Conquest of the Air—4 reels, 16mm sound—Produced and distributed by Films, Inc., 330 W. 42nd St., New York City.

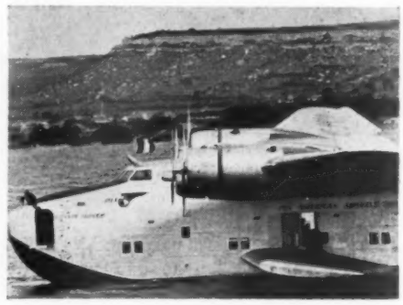
A very new and noteworthy addition to the field of "educational documentaries," covering its subject skillfully and completely by expert selection of contents, and by a quality technique thoroughly professional in photography, animation, vocal narrative, and background music throughout. It presents authentic historical data in a form to compel tense and interested attention from any audience.

"Conquest of the Air" offers a forty-five minute survey of the facts of flight, from the first flyer—Pterodactyl of the



Machine used by Santos-Dumont

late Reptilian Age—down to date. It marshalls in chronological succession the discoveries and dreams, plans and achievements, of Archimedes the Greek, the Chinese kite-makers, Leonardo da Vinci, Professor Charles, Cayley, Mongolfier, Hargrave, Santos-Dumont, Count Zeppelin, the German gliders, the Wrights, Bleriot, and many another. Extant prints and drawings from remote periods are reproduced, and expert motion picture photography covers the modern actualities. Most of the picture is naturally concerned with the last forty years of amazing progression in power and design of



The Atlantic Clipper

machines, pioneer feats, ocean crossings, globe circlings, altitude flying, polar flights, all marking swift progress toward ultimate mastery of the air by man.

Lighter-than-air flight is first treated as a unit, from the earliest hot-air balloons through Zeppelins and blimps, the Shenandoah, the Akron, the Macon, and finally to the Hindenburg disaster, bringing a great temporary lull in lighter-than-air activity. Then, heavier-than-air, from the beginning, through numerous weird attempts funny, fantastic, futile, but significant, through the constructive efforts of the Wrights, Curtiss, Lavasseur, Lindbergh, Law, Chamberlain, Byrd, Costes, Nungesser, Earhart, Balbo, Gatty, Post, and down to the latest 50,000 pound, two-decker transports and substratosphere planes of today.

Splendid animation makes clear the dynamics of wing-lift. Vital flight mechanisms and methods, monoplanes, biplanes, multiplanes, wind tunnels, light beacons, radio beams, servicing methods, land field operations are vividly shown and explained. The elaborate Government training for flyers is presented in full detail — glider operation, ground school, radio school, acrobatics, mass formations, blind flying, pursuit planes and flying fortresses. And the absorbing

SAFETY

at home...at play...on vacation

SAFETY SERIES—SAFETY AT HOME (PRIMARY)—This safety film for children in the first three grades illustrates safety practices for children in the home—care of playthings; hazards of climbing on unsteady furniture; fire, and the handling of matches; protruding nails; loose rugs, etc. ½ reel—$12.

SAFETY SERIES—SAFETY AT PLAY—A safety film for children in the first three grades. Contrasts safe and unsafe places to play; safety in the use of play equipment; good habits in play; proper care of the playground; and first aid for minor injuries. ½ reel—$12.

SAFETY SERIES—VACATION SAFETY—A safety film for use in grades four to six, and in junior high schools. The film units are: (1) Water Safety in an Organized Camp—good swimming precautions. (2) Boating—correct methods of handling boats. (3) Safe Conditions in Camp—the dangers from broken glass and from poison ivy. (4) The Campfire—correct methods of building and extinguishing campfires. 1 reel—$24.

In addition to the three new Safety pictures outlined above, Eastman Classroom Films on Health also include Bacteria ... The Blood ... Breathing ... The Living Cell ... Child Care ... Circulation ... Cleanliness ... Digestion ... First Aid ... Food and Growth ... Home Nursing ... Muscles ... Posture ... Teeth ... and 21 others. Write Eastman Kodak Company, Teaching Films Division, Rochester, N. Y.

Eastman Classroom Films

history concludes with strong emphasis on American supremacy in the air, on imminent expansion to be expected, and frank admission that no limits can be set for air achievement of the future. N.L.G.

The Edge of the World—7reels, 16mm sound — Distributed by Commonwealth Pictures Corp., 729 Seventh Avenue, New York City.

North of Scotland, wrapped in Atlantic mists and storms, stand countless rugged islands, among them Hirta. Supposedly this was the island glimpsed by the Romans circumnavigating England and named by them Ultima Thule, the uppermost land of the world. Today rocky Hirta stands in majestic desolation, a forbidding mass of frowning cliffs and scanty soil, tenantless but for hardy sea birds. Yet Hirta was long inhabited, up to recent times, by a sturdy Scotch folk as rugged as their island. They were the product of generations of struggle for life against impossible handicaps of heartless nature, and had grown staunch, strong, intrepid from the conflict. They wrung a comfortless living from air, sea and man-made soil, raised sheep, goats and Shetland ponies, wheat and hardy vegetables, with occasional imports from the mainland to eke out the necessities of existence. Homes and buildings they built of native stone, laboriously quarried and laid by their own horny hands, and these still stand on the dreary heights of Hirta, empty, windowless but eloquent and still strong. Work, a little play, love and endless hardships made up "life" for these stout-fibered, deeply religious people. They lived it hard and long. Hirta was "home." They loved it and would not change for the "comforts and advantages" of civilization. Their fine old faces, seamed and leathered by work and weather, reflected their uncompromising will, their fortitude of their utter devotion to their Hirta homeland. That life, with its problems and struggles, is now lived through again to the end in the notable sound motion picture, *The Edge of the World.*

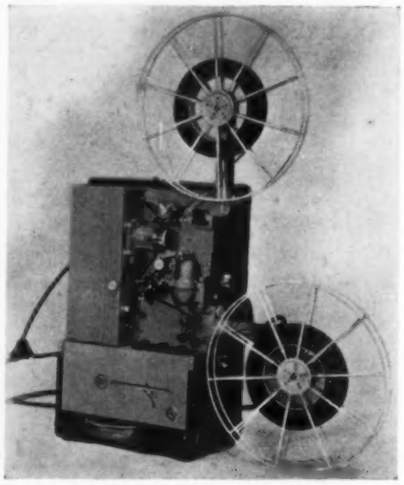
This exceptional film, a "Man of Aran" in epic dimensions, pictures powerfully, grimly, vividly the last year of Hirta's human habitation. It is character drama, rich in human interest and stern truth. The call of civilization is spelling the doom of life on Hirta. Young men are drawn to visit the mainland, learn that life may yield more comforts, and do not return. Hirta's population dwindles. Harvest shrinks for lack of working hands. The losing struggle centers round the sons of the two Nestors of the colony. Accidental tragedy comes to one family, and unrelenting bitterness to the other. As a consequence, dramatically true and very delicately handled, a baby is born out of wedlock. And the adorable baby gradually brings the denouement by melting down the bitterness, harmonizing the warring elements, and making possible the final momentous and unanimous decision for exodus from Hirta. The long, heroic cycle of human life on the island ends and rocky Hirta returns to its lonely isolation amid the Atlantic's mists and storms. N.L.G.

Among the Producers

RCA New Sound Projector

The RCA Manufacturing Company, Camden, New Jersey, has announced a new 16mm sound motion picture projector, called Model PG-170, designed specifically for use among schools and by industrial users of 16mm films. Developed by the same RCA Photophone engineers who have designed 35mm equipment now in use in large production studios and theatres, this 16mm projector, priced at $300, is said to meet the exacting requirements of theatrical projection at moderate cost.

Simplified in construction to provide ease of operation, the new machine has many features which are especially in-



teresting to schools. These include: brilliant projection with 750-watt lamp; 10-watt output sound with push-pull amplication; simplified threading; theatrical framing with no change of projector position; efficient cooling. The machine's sound reproduction is accomplished with RCA stabilized sound, with the sound drum mounted on shielded ballbearings; and an electro-dynamic speaker mounted in separate case. The sound is sufficient for any classroom or average school auditorium. Other interesting features are: separate motor for film take-up and rewind which is adjustable to provide proper tension for 400 to 1600-foot reels; sound and silent film projection speeds with governor-controlled motor, easy cleaning of aperture gates; provision for using microphone; connection for record players; variable tone control; and extreme portability, the projector and speaker together weighing 59 pounds.

S.O.S. Expansion

S.O.S. Cinema Supply Corp. has taken over International Theatre Accessories Corp., with which S.O.S. was affiliated for years. The two concerns jointly occupied the premises at 636 Eleventh Avenue in Manhattan, where they manufactured and distributed a varied line of theatre equipment. There will be no change in the officers or the directors under the new set-up. S.O.S. recently absorbed the business of Consolidated Theatre Supply Corp., and is now negotiating the acquisition of another equipment manufacturer said to be in business since 1922.

Ampro Offers 8mm Projector

The Ampro Corporation, 2839 N. Western Avenue, Chicago, have just introduced a new 8mm projector Model A-8, the first machine of this size to be manufactured by this company. The new model incorporates many fine features in design and construction, among them being: a still picture lever, reverse picture operation, automatic safety shutter and rewind, efficient cooling system, 400 foot reel capacity, 500 watt illumination, automatic fire shutter, reel-locking device, pilot light, centralized controls, easy threading, quite operation, optical system corrected for color films. It has a 1" F 1.6 objective lens, and operates on both AC and DC 100-125 volts.

Keystone Science Units

Three new units in their Elementary Science series of lantern slides and stereographs, each consisting of 25 subjects, are being offered by Keystone View Company, Meadville, Pa. The photography is all new, being the work of Arthur E. Eldridge. The unit on "Butterflies" is furnished all in color only. The stereographs of the units on "Insects" and "Moths" are plain. Both these units are furnished either with eight slides in color or all slides in color. The units previously published in the Elementary Science series are "Birds," "Wild Flowers," and "Trees."

For teachers seeking timely material on Finland, Keystone recommends their Geography Unit No. 32. All the stereographs and slides in this unit were reproduced from negatives made in Finland two years ago by Major Sawders. A teachers' manual accompanies the unit.

New Filmo Master 8 Projector

Just announced is the Filmo Master 8 Projector, latest product of the Bell & Howell Company, 1801 Larchmont Avenue, Chicago. The new machine is fundamentally the same as its predecessor, the Model 122 Filmo 8, but it said to be greatly refined and improved. New features are: rack-and-pinion tilt, whereby the picture is positioned simply by turning a knob; centralized switch panel, with separate controls for both lamp and motor mounted on the base of the projector; tripod socket beneath the base; radio interference eliminator; lens-lock, as on Filmo 16mm. projectors, permitting the projection lens to be locked firmly in position after it is focused. Like its predecessor, the Filmo Master 8 has the B & H film-protecting side-tension feature, all-gear drive, electric rewind, still picture clutch, framing device, and ability to take 300-, 400-, or 500-watt lamps.

THE NEW ERM AND LRM BALOPTICONS

Have Built-In-Blower Cooling System

Located in the forepart of the base, out of the operator's way, the Built-In-Blower Cooling System forces a current of cold air over the opaque material being projected and out through the vents at the top of the Balopticon, thereby cooling the entire interior. Opaque material can be shown for as long as desired without harm. Independent switches are provided for illuminant and cooling system, wiring is concealed.

DESIGNED for GREATER CONVENIENCE
IN USING VISUAL AIDS

The new Balopticons ERM and LRM are in step with modern teaching procedures. These new models have all the features essential to ease in operation, long and trouble-free service, brilliant, sharp screen images, and ample provision for using effectively the wide variety of available teaching material.

BALOPTICON LRM

Slides and Opaque Material

Balopticon LRM is a combined slide and opaque projector with balanced illumination to avoid eyestrain. No great change in image brightness occurs when switching from one to the other nor is it necessary to move the Balopticon.

Listed models differ only in projection lens equipment. The 14 inch focus lens permits a projection distance of 18 to 20 feet. With the 18" focus lens, the projection distance may be as great as thirty feet, if used in a well-darkened room.

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The Film Estimates

Being the Combined Judgments of a National Committee on Current Theatrical Films

(A) Discriminating Adults (Y) Youth (C) Children

Date of mailing on weekly service is shown on each film.

Bad Little Angel (V. Weidler, Guy Kibbee) (MGM) Appealing sentimental little drama with religious motif and much pathos and humor. V. Weidler as little orphan girl charmingly meets all problems through counsel of the Lord. Melodramatic climax, highly emotional for children, but happily resolved. 1-15-40
(A) & (Y) Good of kind (C) Probably

Big Guy, The (McLaglen, Jackie Cooper) (Univ) Innocent lad, forced into aiding escaping convicts, is sentenced for crime. Stolen money recovered, which would have cleared boy, is long withheld by prison warden. McLaglen good as rash, impulsive warden and moral weakling. Morbid theme well handled. 1-23-40
(A) Good of kind (Y) No (C) No

Blondie Brings Up Baby (Penny Singleton, Lake) (Colum) Another in comic-strip series with many of the inanities less funny on screen. Piquancy and charm in suburban domestic scenes. Others seem absurd and stupid. Dagwood loses and regains job, Daisy gets lost, Baby Dumpling goes to school. Very elementary but amusing. 2-6-40
(A) Fair (Y) **Good** (C) **Excellent**

Child Is Born, A (Fitzgerald, Page) (Warner) Serious but uninspired attempt at realistic picture of maternity ward. Young wife about to be mother, under life sentence for unexplained murder, chooses death that child may live. Characters utterly obvious "types." Fitzgerald and Page good, but whole fails to convince. 1-23-40
(A) Unconvincing (Y) No (C) No

Earl of Chicago (Montgomery, Arnold) (MGM) Strange, impossible, rather depressing, yet absorbing picture. Tough uncouth head of Chicago distilleries inherits English estates and title and goes over to "cash in." Kills partner, is tried by House of Lords, found guilty, executed. Unusual psychological role finely done by Montgomery. 2-6-40
(A) **Very good of kind** (Y) Too mature (C) No

End of a Day, The (French-Eng. titles) Absorbing drama done with deft, realistic French touch. Romances, intrigues, amusing complications of retired actresses and actors in private home for aged thespians. Interlocking themes of plot expertly handled. Notable acting by fine cast. 1-30-40
(A) **Excellent** (Y) and (C) No

Everything Happens at Night (Henie, Cummings, Milland) (Fox) Diverting, fast-moving comedy-romance brings in logically Sonja's magnificent solo skating in palatial setting and amusing doings of two competitors for her heart and for a "scoop" on famous doctor, supposedly dead. Charming backgrounds. 1-23-40
(A) & (Y) **Very entertaining** (C) **Good**

Fighting 69th, The (Cagney, O'Brien, Brent) (Warner) Powerful war drama, finely acted by excellent cast, dedicated to the famous Father Duffy. Scrappy, tough, disagreeable private earns hatred of regiment, turns yellow at front. Finally redeemed by priest. Gruesome war scenes but emphasis on human relationships. 1-30-40
(A) Good of kind (Y) Harrowing (C) No

Flying Deuces, The (Laurel and Hardy) (RKO) Ridiculous but amusing comedy a la Mack Sennett, Hardy falls in love with French girl who rejects him. They join the Foreign Legion to forget and soon desert. Typical Laurel and Hardy complications ensue. Clever ending. 1-30-40
(A) Depends on taste (Y) and (C) **Amusing**

Gone With the Wind (Leigh, Gable, de Havilland, Howard) (MGM) Technically superb, splendidly acted, complete screening of famous novel of lovely old South ruined by Civil War. Painstaking detail, gorgeous background and costume, relentless Technicolor, countless episodes, fluctuating dramatic tensity, for nearly 4 hours! 1-30-40
(A) **Notable** (Y) Mature (C) No

Green Hell (Joan Bennett, Fairbanks, Jr.) (Univ) Fine cast used in stereotyped jungle thriller of pseudo-scientific search for Inca treasure by six males and one female (absurdly chic amid Amazonian wilds). Full of artificial Hollywood "punch," limping plot, stilted situations, impossible heroics, pretentious hokum. 1-23-40
(A) Artificial thriller (Y) & (C) No

Heaven With a Barbed Wire Fence (Jean Rogers, Raymond Walburn) (Fox) Mediocre tale of adventures of train-jumpers — eccentric old professor, Spanish girl refugee (totally unconvincing), young hobo, and rather obnoxious boy whose every cent was used to buy Arizona ranch. Plot pointless, action feeble, situations stupid. 1-23-40
(A) (Y) & (C) Worthless

Henry Goes Arizona (Frank Morgan, V. Weidler) (MGM) Entertaining little comedy melodrama. Morgan excellent as genteel but timid New Yorker who inherits ranch after brother's death. Wants to flee plotting enemies, but devoted niece persuades him to stay. Tricks and subdues enemies with cleverness. Unpretentious, good fun. 1-30-40
(A) Good of kind (Y) and (C) **Amusing**

Invisible Man Returns, The (Hardwicke, V. Price) (Univ) Fantastic, utterly preposterous, characteristically Hollywood horror film with pseudo-medical features. Innocent man sentenced for murder, made invisible by doctor, escapes and tracks down real murderer. Doctor restores visibility by uncanny methods. Gruesome. 1-30-40
(A) Absurd (Y) and (C) No

Invisible Stripes (Raft, Jane Bryan) (Warner) Vivid film of ex-convict's struggle to get and hold job and keep kid brother from going crooked. Finally joins gang to supply needed funds for brother, and meets death he anticipated. Mother and brother relationship well done. Lurid gang killings. 2-6-40
(A) Fair of kind (Y) Too morbid (C) No

Judge Hardy and Son (Hardy Family) (MGM) Wholesome amusing "Hardy" story. Andy's romances and financial problems as complicated as ever. Illness of mother sentimentally but humanly and gracefully handled. Situation of selfish daughter deserting her aged parents righted by Judge Hardy and son. Emotional scenes. 1-30-40
(A) and (Y) **Amusing** (C) Fair

Kid Nightingale (John Payne, Jane Wyman) (Warner) Brisk tempo to small town farce. Ambitious talented young singer lured into prize fight business by false promises of scheming promoters. Clean, fast, emphasis on comedy, but predominantly stereotyped and definitely second rate. 1-15-40
(A) Hardly (Y) Valueless (C) No

Mad Empress, The (Medea Novelara, Nagel) (Warner) Elaborate historical picture of mutual devotion of Maximilian and Carlotta and their heroic defense against forces of republic and Juarez despite Napoleon's betrayal. Slow tempo, but well done. English version of previous Spanish production. 2-6-40
(A) & (Y) Fairly interesting (C) No

Main Street Lawyer (Ed. Ellis, A. Louise) (Republic) Nice little small town drama. Kindly, capable attorney blackmailed by crook whom he is about to try, but who knows truth about his prison-born adopted daughter. Melodramatic climax but mostly unpretentious, homely, rather interesting film. 1-15-40
(A) Fair (Y) Good of kind (C) Perhaps

Mexican Spitfire (Velez, Leon Errol) (RKO) Ridiculous, somewhat risque farce-comedy, involving complex marriage and illegal divorce situations. Film flavored by nonsensical antics of shrieking heroine. Much elementary but distinctive humor supplied by Errol's dual role. Slapstick climax a la Mack Sennett. 1-23-40
(A) Depends on taste (Y) Perhaps (C) Hardly

Mill on the Floss (Geraldine Fitzgerald) (Standard) George Eliot's famous "Romeo and Juliet" story (of young lives ruined by family feud) expertly set, costumed and acted. Convincingly portrays early 19th century England. Fitzgerald superb. Picture's faults largely those due to faithful screening of the Mid-Victorian novel. 1-15-40
(A) **Excellent** (Y) **Good** (C) Mature

My Little Chickadee (West, Fields) (Univ) Risque western comedy melodrama of Gay 90's. Happy combination of West and Fields. "Flower Belle" of checkered past, driven out of town by woman vigilantes, saves self by mock marriage to Fields. Mae milder, Fields funnier than of old. 2-6-40
(A) Good of kind (Y) & (C) No

Oh, Johnny, How You Can Love (Tom Brown, Peggy Moran) (Univ) Fairly entertaining harmless lightweight farce-melodrama. Traveling salesboy wrecks eloping girl's car, is persuaded to take her to New York but gangster sidetracks them to Canada. Climax in trick tourist cottage. Snappy dialogue and action. 2-6-40
(A) Perhaps (Y) **Amusing** (C) Fair

Our Neighbors, the Carters (Fay Bainter, Frank Craven) (Para) Rather pleasant, human unpretentious little story. Father of five forced out of business by cut-rate competitor. Wealthy friend offers to adopt child and settle annuity on family. All ends happily with family together and business established. 1-23-40
(A) Pleasing (Y) & (C) **Very good**

Overture to Glory (Hebrew-Eng. titles) Story of Jewish Cantor who is influenced by composer to become opera singer, but returns eventually to sing his last in the synagogue. Much fine singing, many excellent, realistic scenes, but action slow and many details long drawn out. 1-30-40
(A) Depends on taste (Y) & (C) Little interest

Raffles (de Havilland, Niven) (Warner) Excellent, completely diverting, deftly played entertainment. Debonnaire gentleman-thief, as Robin Hood in English high life, pulls final coup to save honor of friend before reforming for his lady love. Suspense well-sustained. Niven charming as suave, clever, likeable Raffles. 1-15-40
(A) & (Y) **Fine of kind** (C) Too mature

Remember the Night (Barbara Stanwyck, Fred McMurray) (Para) After trite opening, rather improbable situation of prosecuting attorney and girl thief becomes thoroughly human, diverting story. He postpones trial, posts bond and takes culprit home for Christmas! Sentimental scenes well done. Consistent, natural conclusion. 1-23-40
(A) Fairly good (Y) **Entertaining** (C) Perhaps

Return of Dr. X (R. Lane, H. Bogart) (Warner) Murder mystery drama. Doctor's experiments with blood composition resurrects a man dependent upon blood of others! Oft-used role of meddling smart aleck reporter who unravels crimes. Thrill, horror and suspense in pseudo-medical atmosphere. 1-15-40
(A) Depends on taste (Y) Doubtful (C) No

Slightly Honorable (O'Brien, Arnold) (U.A.) Lively, wisecracking comedy-murder-mystery with cheap touches. District attorney gets out of political machine and into trouble. Framed in murder case. Absurdly pursued and caught by empty-headed heroine. Moments of high tension, but mainly humorous. 2-6-40
(A) Diverting (Y) Doubtful (C) No

Student Romance (Patrick Knowles) (British) Over-sentimentalized musical comedy of student life at Heidelberg. Usual far-fetched romantic tale of singing (not too well) student, his comic faithful friend, a princess (poor actress, thin voice) and pretty barmaid. Whole production a bit cloying. 1-9-40
(A) Mediocre (Y) and (C) Probably good

Thou Shalt Not Kill (Bickford) (Republic) Mediocre melodrama. Innocent man convicted of murder of girl. Murderer confesses to priest. Dramatic climax, when two priests discuss sanctity of confessional, misses. Melodramatic climax when murderer tries to kill priest! Usual thrill stuff. 1-15-40
(A) Poor (Y) & (C) By no means

Too Busy to Work (Jones Family) Mayor-husband neglects business for civil affairs. Wife proceeds to teach him lesson by neglecting home for amateur theatricals. Many farcical, over-worked, ridiculous situations. Definitely class B but harmless, perhaps amusing for the uncritical. 1-15-40
(A) Hardly (Y) & (C) Probably amusing

Tropic Fury (Arlen, Devine) (Univ) Formula adventure story. Rubber industry specialist goes into depths of Amazon, finds lost scientist at mercy of cruel rubber king with delusions of grandeur. No new angles to unpretentious usual-type thriller. Fair interest for the undiscriminating. 2-6-40
(A) Mediocre (Y) Perhaps (C) No

We Are Not Alone (Muni, Bryant, Robson) (Warner) Strong, poignant drama of human relationships skillfully cast and produced. Muni notable as kindly, understanding country doctor, caught, with fine little governess heroine in tragic web woven by ignorance, intolerance and stupidity which sends them to their death. 12-19-39
(A) **Fine of kind** (Y) Depressing (C) No

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(See advertisement on inside back cover)
Williams, Brown and Earl, Inc.
918 Chestnut St., Philadelphia, Pa.

REFERENCE NUMBERS

(1) indicates firm supplies 16 mm. silent.
(2) indicates firm supplies 16 mm. sound-on-film.
(3) indicates firm supplies 16 mm. sound and silent.
(4) indicates firm supplies 35 mm. silent.
(5) indicates firm supplies 35 mm. sound.
(6) indicates firm supplies 35 mm. sound and silent.

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